

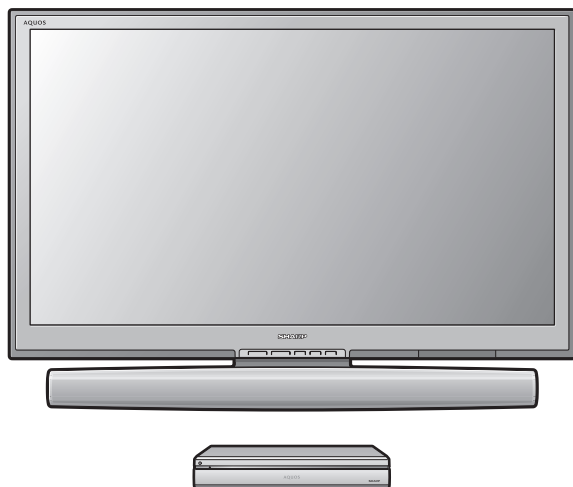
SHARP®

LC-52XS1E LC-65XS1E

TU-X1E

LCD COLOUR TELEVISION
LCD-FARBFERNSEHGERÄT
TÉLÉVISEUR COULEUR À ÉCRAN
CRISTAUX LIQUIDES (LCD)
TELEVISORE A COLORI LCD
LCD-KLEURENTELEVISIE
TELEVISIÓN EN COLOR LCD
TELEVISOR DE CRISTAL LÍQUIDO

AQUOS



OPERATION MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUALE DI ISTRUZIONI
GEBRUIKSAANWIJZING
MANUAL DE MANEJO
MANUAL DE OPERAÇÃO



ENGLISH

DEUTSCH

FRANÇAIS

ITALIANO



NEDERLANDS

ESPAÑOL

PORTUGUÊS



SPECIAL NOTE FOR USERS IN THE U.K.

The mains lead of this product is fitted with a non-rewireable (moulded) plug incorporating a 13A fuse. Should the fuse need to be replaced, a BSI or ASTA approved BS 1362 fuse marked  or  and of the same rating as above, which is also indicated on the pin face of the plug, must be used.

Always refit the fuse cover after replacing the fuse. Never use the plug without the fuse cover fitted.

In the unlikely event of the socket outlet in your home not being compatible with the plug supplied, cut off the mains plug and fit an appropriate type.

DANGER:

The fuse from the cut-off plug should be removed and the cut-off plug destroyed immediately and disposed of in a safe manner.

Under no circumstances should the cut-off plug be inserted elsewhere into a 13A socket outlet, as a serious electric shock may occur.

To fit an appropriate plug to the mains lead, follow the instructions below:

IMPORTANT:

The wires in the mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this product may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured blue must be connected to the plug terminal which is marked N or coloured black.
 - The wire which is coloured brown must be connected to the plug terminal which is marked L or coloured red.
- Ensure that neither the brown nor the blue wire is connected to the earth terminal in your three-pin plug.

Before replacing the plug cover make sure that:

- If the new fitted plug contains a fuse, its value is the same as that removed from the cut-off plug.
- The cord grip is clamped over the sheath of the mains lead, and not simply over the lead wires.

IF YOU HAVE ANY DOUBT, CONSULT A QUALIFIED ELECTRICIAN.

- “TV” when used in this manual means the Display and AVC System.
- The illustrations and the OSD in this operation manual are for explanation purposes and may vary slightly from the actual operations.
- The examples used throughout this manual are based on the LC-52XS1E model.
- This model is compatible with H.264 (MPEG4 H.264, MPEG4 AVC, MPEG4 AVC/H.264) compressed broadcasts.
- Refer to page 59 for the meaning of abbreviated terms.

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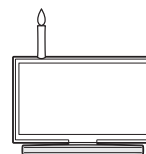
Introduction

Dear SHARP customer

Thank you for your purchase of the SHARP LCD colour TV product. To ensure safety and many years of trouble-free operation of your product, please read the Important Safety Precautions carefully before using this product.

Important Safety Precautions

- Cleaning—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
- Water and moisture—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.
- Do not place vases or any other water-filled containers on this product. The water may spill onto the product causing fire or electric shock.
- Stand—Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.
- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.
- Ventilation—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impact applied. If the LCD panel is broken, be careful not to be injured by broken glass.
- Heat sources—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).
- Headphones—Do not set the volume at a high level. Hearing experts advise against extended listening at high volume levels.
- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.
- To prevent fire or shock hazard, do not place the AC cord under the TV set or other heavy items.
- Do not display a still picture for a long time, as this could cause an afterimage to remain.
- There is power consumption always if main plug is connected.
- Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified person to perform servicing.



The LCD panel is a very high technology product, giving you fine picture details.

Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red. This is within product specifications and does not constitute a fault.

Precautions when transporting the Display

When transporting the Display, never carry it by holding onto the speakers. Be sure to always carry the Display by two people holding it with two hands—one hand on each side of the Display.

Trademarks

- "HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC."

- Manufactured under license from Dolby Laboratories.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

- TruSurround XT, SRS and  symbol are trademarks of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.

- The "HD ready" Logo is a trademark of EICTA.

- The DVB logo is the registered trademark of the Digital Video Broadcasting—DVB—project.

- "x.v.Colour" and **x.v.Colour** are trademarks of Sony Corporation.

Remote control unit

NOTE

- The symbols **DVD**, **STB** and **VCR** indicate that the buttons become available in respective operating mode when using as a universal remote control.

1 **TV** | **(TV Standby/On)** (Page 17)

2 **LIGHT** **DVD STB VCR**

When pressed, buttons that are frequently used (**P**/**^**/**v**, **+/-**, **0-9** numeric buttons, **S** and **→**) will light. The light will turn off if no operations are performed within about five seconds. This button is used for performing operations in low-light situations.

3 **FUNCTION** **DVD STB VCR**

Press this button briefly (for more than 0.2 second), and the remote control switches for DVD, SetTopBox or VCR operation and currently controlled devices will be indicated in the LCD window. See page 50 for how to use this unit as a universal remote control.

4 **LCD window** **DVD STB VCR**

This screen shows which device you are currently controlling (TV, DVD, STB or VCR).

5 **0-9 numeric buttons** **STB**

Set the channel.

Enter desired numbers.

Set the page in teletext mode.

- When the five Nordic countries (Sweden, Norway, Finland, Denmark, or Iceland) are selected in the country setting from "Auto Installation" (page 34), DTV services are four digits. When another country is selected, DTV services are three digits.

6 **↶ (Flashback)**

Press to return to the previously selected channel or external input.

7 **ATV**

Press to access conventional analogue TV mode.

8 **DTV**

Press to access digital TV mode.

9 **+/- (Volume)**

Increase/decrease TV volume.

10 **Mute**

TV sound on/off.

11 **R/G/Y/B (Colour) buttons**

The coloured buttons are correspondingly used to select the coloured items on the screen (e.g. EPG, MHEG-5, Teletext).

12 **▲/▼/◀/▶ (Cursor)** **DVD**

Select a desired item on the setting screen.

OK **DVD STB**

Execute a command within the "MENU" screen.

ATV/DTV/SAT: Display the programme list when no other "MENU" screen is running.

13 **END**

Exit the "MENU" screen.

14 **Buttons for teletext and other useful features**

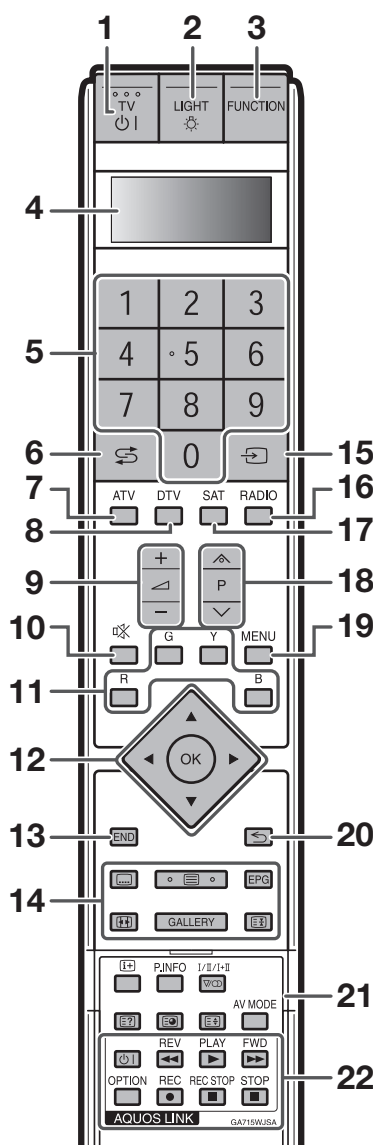
(Subtitle)

Switch subtitle languages on/off (Pages 21 and 37).

(Teletext)

ATV: Display analogue teletext (Page 21).

DTV/SAT: Select MHEG-5 and teletext for DTV/SAT (Page 21).



15 **→ (INPUT SOURCE)**

Select an input source (Page 17).

16 **RADIO**

DTV/SAT: Switch between Radio and Data mode.

- When only data broadcasting (no radio broadcasting) is transmitted by DVB, the radio broadcasting will be skipped.

17 **SAT**

Press to access satellite mode.

18 **P/^/v** **DVD STB VCR**

Select the TV channel.

19 **MENU** **DVD**

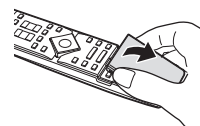
ATV/DTV/SAT: "MENU" screen on/off. DVD: Title menu on/off.

20 **↶ (Return)**

Return to the previous "MENU" screen.

21 **Buttons for teletext and other useful features**

Flip open the remote control cover on the front.



(Display information)

Press to display the station information (channel number, signal, etc.) in the upper right corner of the screen (Page 40).

P. INFO

Press to display programme information which is transmitted through digital video broadcasting in the upper left corner of the screen (DTV/SAT only).

1/1/1/1/1 **(Sound mode)**

Select a sound multiplex mode (Page 17).

(Reveal hidden Teletext) (Page 21)

(Subpage) (Page 21)

(Top/Bottom/Full)

Set the area of magnification in teletext mode (Page 21).

AV MODE

Select a video setting (Page 32).

22 **AQUOS LINK buttons** **DVD STB VCR**

TV mode: If external equipment such as a AQUOS BD Player is connected via HDMI cables and is AQUOS LINK compatible, you can use these AQUOS LINK buttons. See pages 27 and 29 for details. DVD/VCR mode: Press **OPTION** to pause the picture.

- The buttons except **OPTION** are correspondingly used to select the items on the screen.

STB mode: Only the **TV** button can be used to operate on STB.

EPG

DTV/SAT: Display the EPG screen (Pages 18-20).

(WIDE MODE)

Select a wide mode (Pages 38 and 46).

GALLERY

Press to enter the Gallery Mode (Page 44).

(Freeze/Hold)

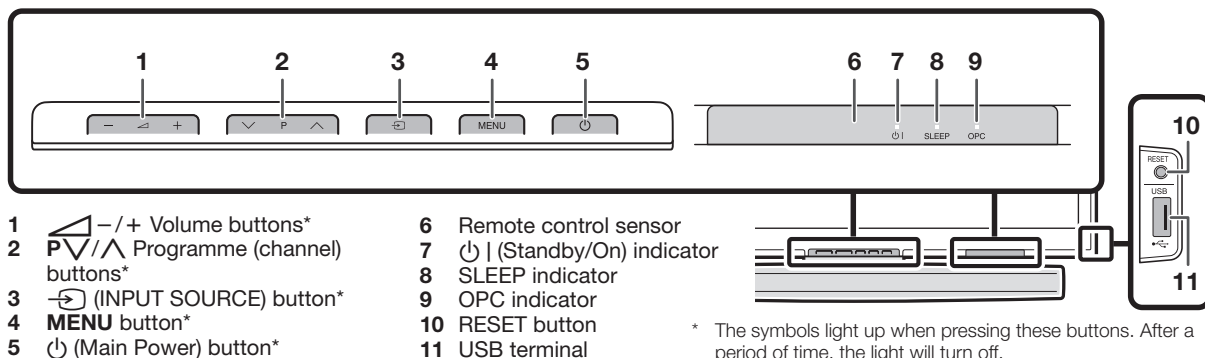
Press to freeze a moving image on the screen.

Teletext: Stop updating teletext pages automatically or release the hold mode.

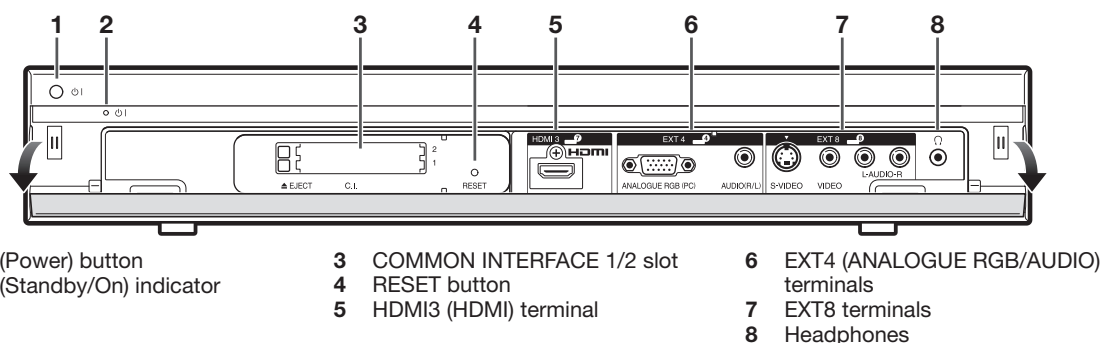
Introduction

Part name

Display (Front view/Side view)

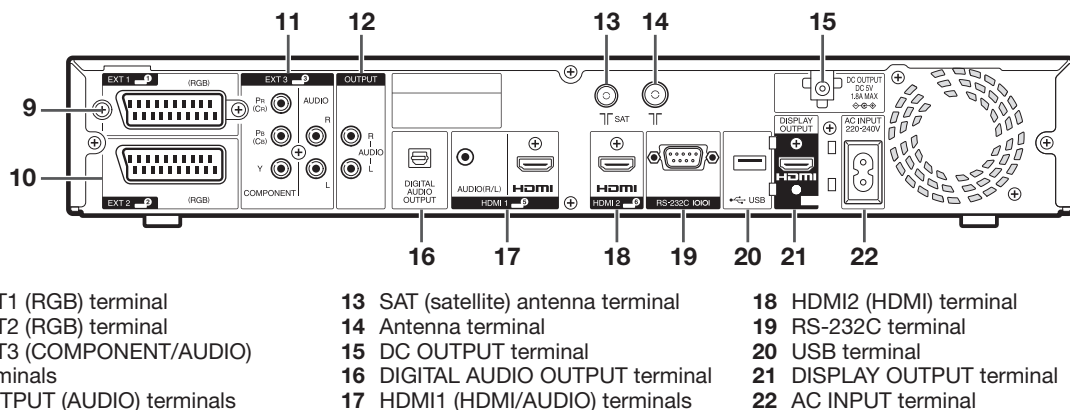


AVC System (Front view/Rear view)

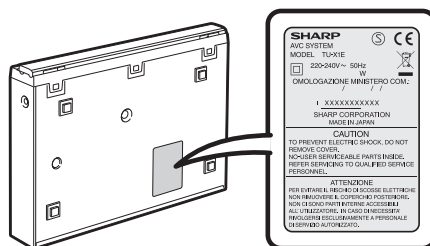


WARNING

- Excessive sound pressure from earphones and headphones can cause hearing loss.
- Do not set the volume at a high level. Hearing experts advise against extended listening at high volume levels.



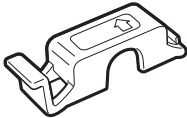
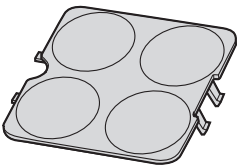
AVC System (Bottom view)

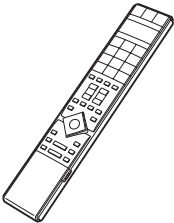

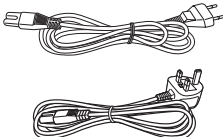
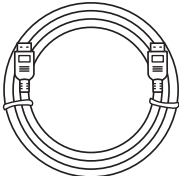
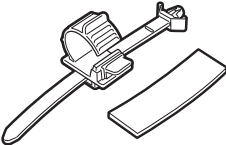



Product label is on the bottom of the AVC System.

Preparation

Supplied accessories

<p>HDMI cable holder (× 1)</p>  <p>Pages 8</p>	<p>AC cord cover (× 1)</p>  <p>This covers the compartment on the back of the Display after installing the wall mount brackets or stand units.</p>
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<p>Remote control unit (× 1)</p>  <p>Pages 3 and 6</p>	<p>“AAA” size alkaline battery (× 2)</p>  <p>Page 6</p>	<p>AC cord (× 2)</p>  <p>Product shape varies in some countries.</p> <p>Page 10</p>
<p>HDMI cable (× 1)</p>  <p>Pages 8 and 9</p>	<p>HDMI cable fixture/ cushion (× 1)</p>  <p>Page 9</p>	<p>Operation manual</p> 

Optional accessories

The listed optional accessories are available for this LCD colour TV. Please purchase them at your nearest shop.

- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

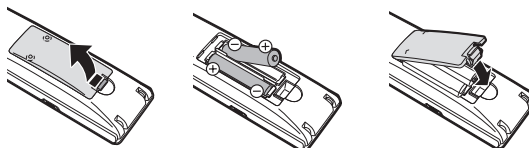
No.	Part name	Part number
1	Wall mount bracket (LC-52XS1E)	AN-52AG8
2	Wall mount bracket (LC-65XS1E)	AN-65AG2
3	Stand unit (LC-52XS1E)	AN-52ST1
4	Stand unit (LC-65XS1E)	AN-65ST1

Preparation

Inserting the batteries

Before using the TV for the first time, insert two supplied “AAA” size alkaline batteries. When the batteries become depleted and the remote control unit fails to operate, replace the batteries with new “AAA” size batteries.

- 1 Open the battery cover.
- 2 Insert two supplied “AAA” size alkaline batteries.
 - Place batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.
- 3 Close the battery cover.

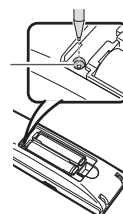


CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- Do not overuse the light-up function of the **LIGHT** button, doing so may shorten the battery life. Replace the batteries when the light on the LCD window or the light-up function becomes weak or when the window becomes blurry.
- Do not continue to use the remote control unit with the batteries running low. This may result in error message or malfunction. Should this happen replace the batteries and leave it unused for a while. Otherwise, you may open the rear battery cover and press the **RESET** button. When you press the **RESET** button, your universal remote control settings will be deleted.
- The remote control unit has a internal memory of external devices. In order not to lose the data, replace the batteries quickly. If the manufacturer code is initialised and lost, you can input the manufacturer code again (See page 50–53).
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.
- When replacing the batteries, use alkaline batteries instead of zinc-carbon ones.

RESET
button



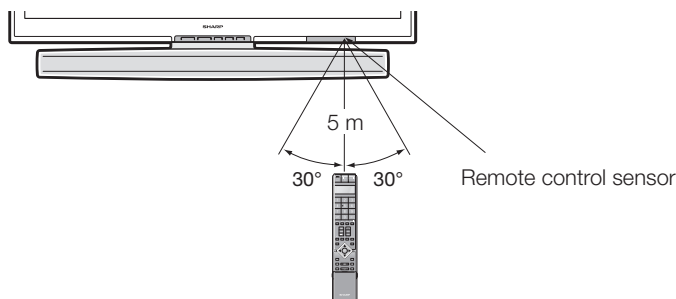
Note on disposing batteries:

The batteries provided contain no harmful materials such as cadmium, lead or mercury.

Regulations concerning used batteries stipulate that batteries may no longer be thrown out with the household rubbish. Deposit any used batteries free of charge into the designated collection containers set up at commercial businesses.

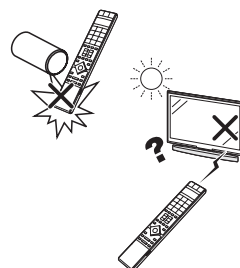
Using the remote control unit

Use the remote control unit by pointing it towards the remote control sensor. Objects between the remote control unit and sensor may prevent proper operation.



Cautions regarding the remote control unit

- Do not expose the remote control unit to shock. In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote control sensor of the Display is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or the Display, or operate the remote control unit closer to the remote control sensor.



Quick guide

Initial installation overview

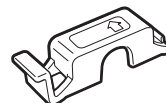
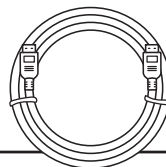
Follow the steps below one by one when using the TV for the first time. Some steps may not be necessary depending on your TV installation and connection.

Before turning on the main power

① Prepare the Display (Page 8)

HDMI cable:

- Connect the supplied HDMI cable to the HDMI terminal on the Display. Fix the cable to the Display with the supplied HDMI cable holder then.



② Set the TV and antenna cables (Page 9)

Display:

- Select the location of the TV.

HDMI cable fixture/cushion:

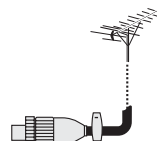
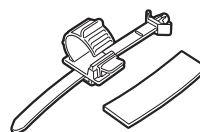
- Connect the supplied HDMI cable with one side connected to the Display as in step ① to the DISPLAY OUTPUT on the AVC System. Connect the cable to the AVC System with the supplied HDMI cable fixture/cushion.

Analogue/DVB-C/DVB-T antenna:

- Connect the antenna of an antenna system, cable system, or room antenna to the antenna terminal of the AVC System.

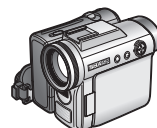
Satellite antenna:

- Connect an antenna plug, e.g., from the antenna change over switch or from the twin-LCN of a satellite system to the SAT terminal of the AVC System.



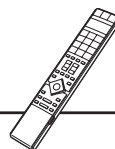
③ Connect external devices or sound components (Pages 22–25)

- If desired, connect external devices such as a DVD recorder.
- Cables and terminals may vary depending on the devices you use.




④ Prepare remote control unit (Page 6)

- Insert the supplied “AAA” size alkaline batteries into the remote control unit.



Turning on and running the initial auto installation

⑤ Turn on the TV power (Page 10)

- Plug the AC cord into an AC outlet.
- Press  on the Display to turn on the main power of the Display.

⑥ Conduct initial auto installation (Pages 11–15)

- The initial auto installation wizard appears automatically (only the first time the TV is turned on).

⑦ Adjust DVB-T/S/C antenna (Page 16)

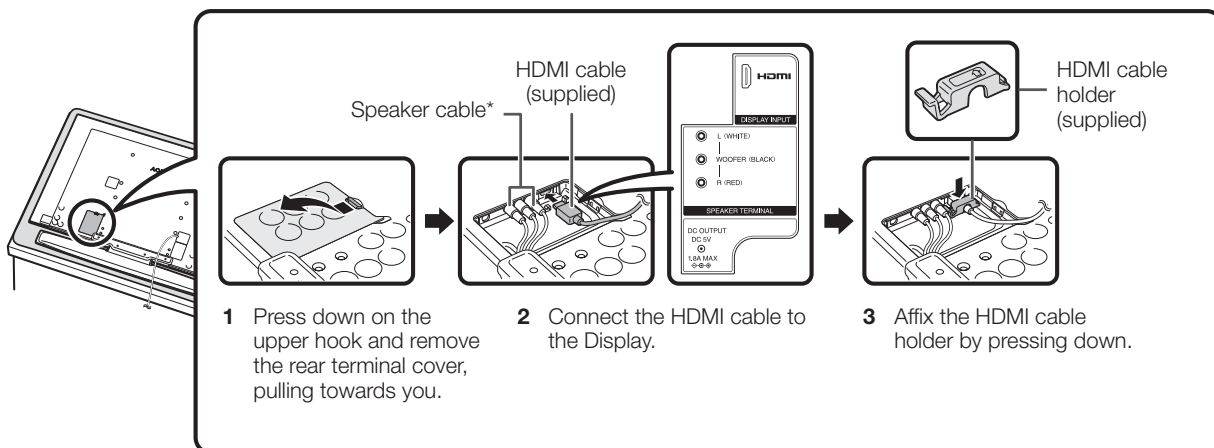
- If necessary position or align the DVB-T/S/C antenna.

Before turning on the main power

Preparing the Display

- Make sure the Display is turned off before beginning work.
- Before performing work, spread cushioning over the surface on which you will be laying the Display. This will prevent it from being damaged.

Connecting the HDMI cable with the HDMI cable holder



NOTE

- * These are terminals for the speaker of the TV. Do not connect any other kind of cables.
- Do not disconnect the speaker cable unless absolutely necessary. If you disconnect the speaker cable, confirm each colour of the speaker plugs and speaker terminals (the order of the colour from left to right: red/black/white) before connecting the speaker cable again.

Mounting the Display on a wall

- **This Display should be mounted on a wall only with the wall mount bracket available from SHARP (Page 5). The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.**
- **Mounting the Display requires special skills and should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.**
- You can ask qualified service personnel about using an optional bracket to mount the Display to a wall.
- To use this Display mounted on a wall, first remove the adhesive tape at the two locations on the rear of the Display, and then use the screws supplied with the wall mount bracket to secure the bracket to the rear of the Display.

● When using wall mount bracket AN-52AG8 or AN-65AG2

You can check the centre of the TV screen using the mark engraved on the wall mount bracket when mounting the Display on the wall.

LC-52XS1E: The centre of the TV screen is at mark "E" on the wall bracket.

LC-65XS1E: The centre of the TV screen is at mark "A" on the wall bracket.

Setting the Display with the optional stand


- This Display should be set on a table or floor, etc. only with the stand available from SHARP, sold separately (Page 5).
- Be sure to follow the instructions for the stand manual.

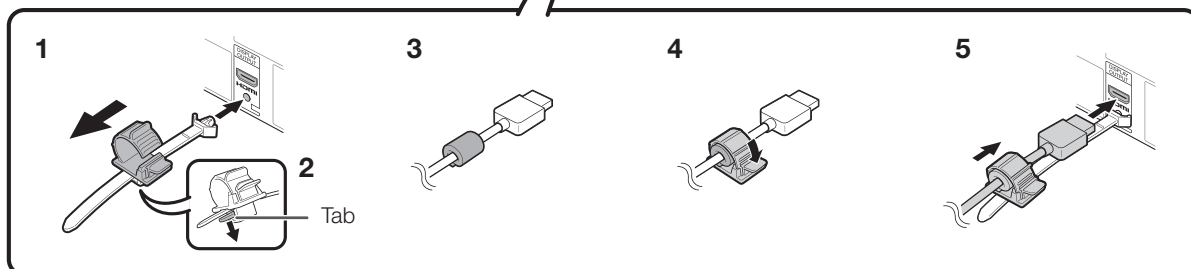
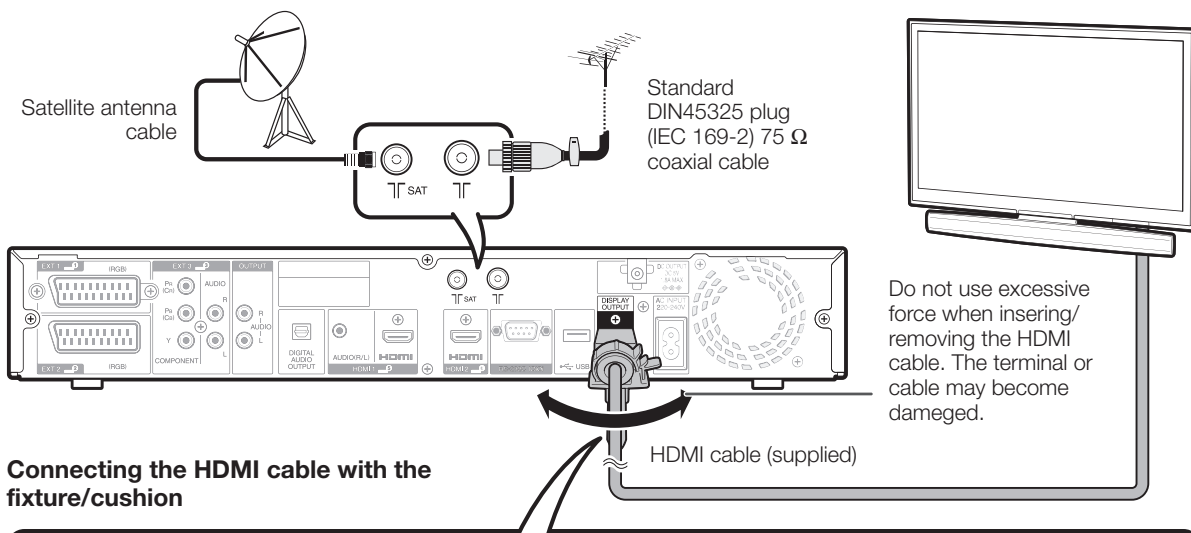
Setting the TV and antenna cables

Supplying power to the antenna

You must supply power to the antenna in order to receive digital terrestrial broadcasts or satellite broadcasts after running the initial auto installation. Go to "MENU" > "Setup" > "Antenna Setup-DIGITAL" > "Digital Setup" > "Supply Voltage" > select "On".

NOTE

- The  indicator of the AVC System lights up when the main power is turned on after connecting the Display and AVC System using the supplied HDMI cable.
- The HDMI cable should be firmly connected. Failure to do so will loosen the cable and cause a contact failure when moving the AVC System. This can cause result in an error message appearing on the screen without a visible picture.



1 Insert the fixture for the HDMI cable into the hole below the DISPLAY OUTPUT terminal on the AVC System.

2 Detach the parts of the fixture while holding the tab of the fixture downward.
3 Wrap the cushion around the HDMI cable.

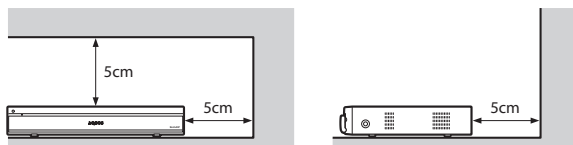
4 Attach the parts of the fixture on the cushion, pushing the tab downward.

5 Connect the HDMI cable with the fixture to the DISPLAY OUTPUT terminal while sliding on the bar of the fixture.

Handling the AVC System

CAUTION

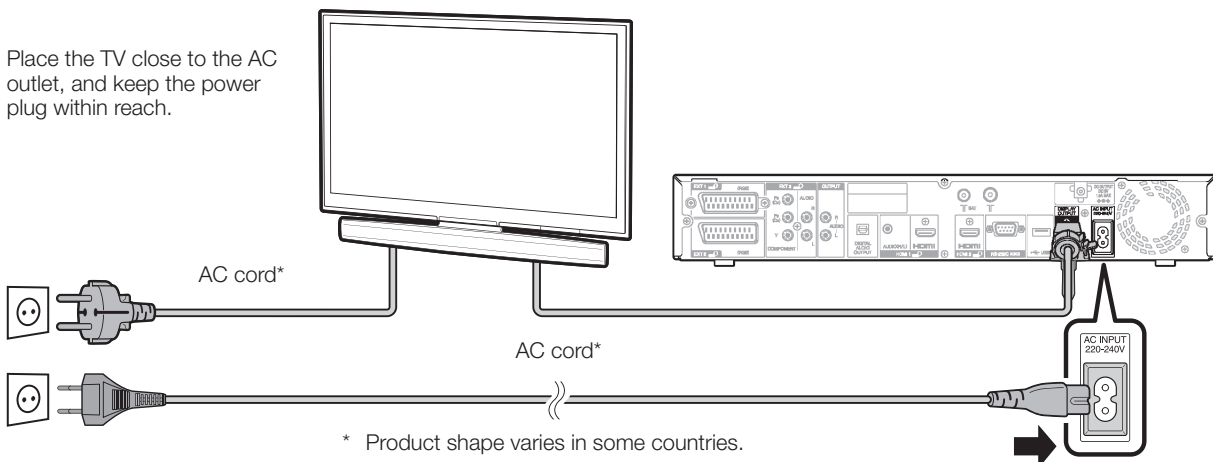
- Do not put a VCR or other device on top of the AVC System.
- Keep enough space above and to the sides of the AVC System.
- Do not block the ventilation openings on the top and left side or the exhaust fan on the right side.
- Do not spread a thick cloth beneath the AVC System or cover it with one, as this can cause overheating and result in malfunction.



Turning on and running the initial auto installation

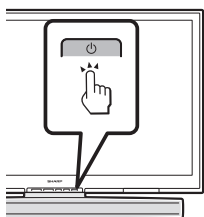
Plugging the AC cord to the AC outlet

Place the TV close to the AC outlet, and keep the power plug within reach.



Power on and run the auto installation

- 1 Turn on the main power using  on the Display.



- 2 Run the initial auto installation (Pages 11–15).

✓ Language setting

English		
Italiano		
Svenska		
...		

✓ Home/Store setting

HOME	STORE
------	-------

✓ Country setting

Austria	A	B/G		
Finland	FIN	B/G		
Greece	GR	B/G		
...				

✓ Channel search setting

Digital Search
Analogue Search
Skip

Digital Search

**Start the digital service settings
(Pages 11–13)**

Terrestrial

Cable

Analogue Search

**Start the analogue channel searching
(Page 13)**

01	628.25	02	693.25	03	767.25	04	831.25	...

Skip

**Start the satellite service settings
(Pages 14–15)**

Yes

No

Initial auto installation

When the TV is powered on for the first time after purchase, the initial auto installation wizard appears. Follow the menus and make the necessary settings one after another.

Confirm the following before turning on the main power

- Are the Display and AVC System connected using the supplied HDMI cable?
- Is the antenna cable connected?
- Is the AC cord plugged in?

- 1 Press on the Display.
 - The initial auto installation wizard appears.
- 2 Setting the OSD language.

English		
Italiano		
Svenska		
⋮		

Press /// to select the desired language, and then press **OK**.

- 3 Selecting the location of the TV.

HOME	STORE
------	-------

Press / to select where you will use this TV, and then press **OK**.

- HOME: "STANDARD" will be the default value for the "AV MODE" setting.
- STORE: "DYNAMIC (Fixed)" will be the default value for the "AV MODE" setting. If the "AV MODE" is changed, the TV will automatically switch back to "DYNAMIC (Fixed)" when there is no signal input from the TV or remote control unit for 30 minutes.

- 4 Setting the country.

Austria A B/G		
Finland FIN B/G		
Greece GR B/G		
⋮		

Press /// to select your country or area, and then press **OK**.

- This setting screen only appears during the first installation.

- 5 Starting channel search.

Digital Search
Analogue Search
Skip

Press / to select "Digital Search", "Analogue Search" or "Skip", and then press **OK**.

- To watch analogue broadcasts, digital broadcasts and satellite broadcasts, you should perform the channel search setting for each format.
- If you want to search for more broadcasts, execute "Additional Search" from the "Programme Setup" menu (Pages 34–36).
- When you select "Skip", only "Satellite Search" will be performed. You should perform "Digital Search" and "Analogue Search" from "Auto installation" under the "Setup" menu if needed.
- After performing "Digital Search" or "Analogue Search", the screen switches to the "Satellite Search" setting. You should then execute "Yes" if you want to search for the satellite channels.

"Digital Search" setting

Press / to select "Terrestrial" or "Cable", and then press **OK**.

Terrestrial	Cable
-------------	-------

● "Terrestrial" searching

01 628.25	02 693.25	03 767.25	04 831.25	...

The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

- To abort the initial auto installation in progress, press .



After searching for DVB-T channels, the screen switches to the "Satellite Search" setting (Page 14).

NOTE

- If you turn off the main power on the Display while performing "Terrestrial" searching, the initial auto installation wizard will not appear. The auto installation function allows you to execute the installation again from the "Setup" menu (Page 34).
- The initial auto installation wizard will turn off if you leave the TV unattended for 30 minutes before searching for channels.

● “Cable” searching

The current DVB-C settings are displayed on the screen.

Scrambled stations:	No
Search method:	Channel
Start frequency:	47.0 MHz
Network ID:	None
Symbol rate 1:	6875
Symbol rate 2:	6900
QAM modulation 1:	64
QAM modulation 2:	None

Start Search

Change Setting

① When you start searching for DVB-C channels with the current setting:

- ① Press ◀▶ to select “Start Search”, and then press OK.

01	628.25	02	693.25	03	767.25	04	831.25	...

- ② The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

- To abort the initial auto installation in progress, press ⏮.



After searching for DVB-C channels, the screen switches to the “Satellite Search” setting (Page 14).

NOTE

- If you turn off the main power on the Display while performing “Cable” searching, the initial auto installation wizard will not appear. The auto installation function allows you to execute the installation again from the “Setup” menu (Page 34).
- The initial auto installation wizard will turn off if you leave the TV unattended for 30 minutes before searching for channels.

② When you change each item to the appropriate settings:

- ① Press ◀▶ to select “Change Setting”, and then press OK.

Scrambled stations	[No]
Search method	[Ch]
Start frequency	[47.0]
Network ID	[None]
Symbol rate 1	[6875]
Symbol rate 2	[6900]
QAM modulation 1	[64]
QAM modulation 2	[None]
Search start	

Yes

No

- ② Press ▲/▼ to select the menu, and then press OK.
- ③ Press ▲/▼/◀▶ or 0-9 to select or input the appropriate item/value, and then press OK.
- ④ Press ▲/▼ to select “Search start”, and then press OK.

01	628.25	02	693.25	03	767.25	04	831.25	...

- ⑤ The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.
- To abort the initial auto installation in progress, press ⏮.



After searching for DVB-C channels, the screen switches to the “Satellite Search” setting (Page 14).

NOTE

- If you turn off the main power on the Display while performing “Cable” searching, the initial auto installation wizard will not appear. The auto installation function allows you to execute the installation again from the “Setup” menu (Page 34).
- The initial auto installation wizard will turn off if you leave the TV unattended for 30 minutes before searching for channels.

Quick guide

Menu	Description	Selectable Item
Scrambled Stations	Specifies if you need to add pay-TV services.	Yes, No
Search Method	Specifies how you search channels.	Channel: Extracts all of information from a channel (quick, but needs corresponding TV stations). Frequency: Checks every frequency in range (slow).
Start frequency	-----	47.0–858.0 MHz
Network ID	Specifies the network. Set this to register only the specified network ID without registering any special services.	None, 0–65535
Symbol rate 1*	The symbol rates are specified by the cable provider. Input the value received for CATV.	1000–9000
Symbol rate 2*	The symbol rates are specified by the cable provider. Input the value received for CATV.	1000–9000
QAM Modulation 1	-----	16, 32, 64, 128, 256
QAM Modulation 2	-----	None, 16, 32, 64, 128, 256

* Set up "Symbol rate 2" if the cable provider uses several symbol rates.

"Analogue Search" setting

01 628.25	02 693.25	03 767.25	04 831.25	...

The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

- To abort the initial auto installation in progress, press ↵.



After searching for analogue channels, the screen switches to the "Satellite Search" setting (Page 14).

NOTE

- If you turn off the main power on the Display while performing "Analogue Search", the initial auto installation wizard will not appear. The auto installation function allows you to execute the installation again from the "Setup" menu (Page 34).
- The initial auto installation wizard will turn off if you leave the TV unattended for 30 minutes before searching for channels.

“Satellite Search” setting

Press **◀/▶** to select “Yes”, and then press **OK**.

- If you do not perform “Satellite Search” setting, select “No”, and then press **OK**.
- The current DVB-S setting screen is displayed.

①

②

- You must first complete “Change Setting” before moving to the “Next” setting.

- ① When starting the satellite search after setting the scrambled stations:
Press **◀/▶** to select “Next”, and then press **OK**.

- **Start Search:** DVB-S channel searching.

- ① Press **◀/▶** to select “Start Search”, and then press **OK**.

- ② The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.
- To abort the initial auto installation in progress, press **↵**.

Change setting:

- ① Press **◀/▶** to select “Change setting”, and then press **OK**.

- The setting screen of “Scrambled stations” and “Symbol rate” is displayed.

- ② Press **▲/▼** to select “Scrambled stations”, and then press **OK**.

- Scrambled stations: Specifies if you need to add pay-TV services.

- ③ Press **◀/▶** to select “Yes”, and then press **OK**.

- ④ Press **▲/▼** to select the symbol rate you want to modify, and then press **OK**.

- Symbol rate: You need to set each symbol rate of all the satellite broadcasts that the TV can receive (eight is the maximum number of symbol rates that can be displayed).

- ⑤ Press **◀/▶** to select “Search start”, and then press **OK**.

- ⑥ The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

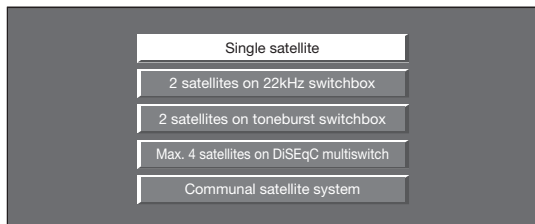
- To abort the initial auto installation in progress, press **↵**.

Quick guide

- 2** When you change the antenna connection setting:

Press **◀/▶** to select “Change Setting” on the DVB-S setting screen in the left column, and then press **OK**.

- The antenna connection setting screen is displayed.

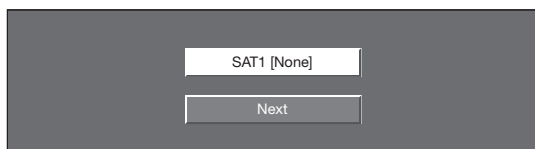


NOTE

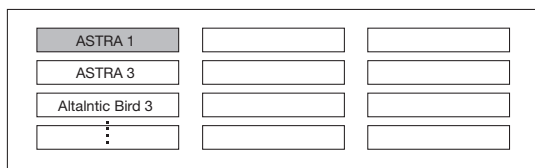
- You can select the antenna connection method from the five types. Consult your dealers before using a method other than “Single Satellite”.

“Single satellite” setting

- Press **▲/▼** to select “Single satellite”, and then press **OK**.
- Press **▲/▼** to select “SAT1 [None]” to display the satellite broadcasts that the TV can receive, and then press **OK**.



- Press **▲/▼/◀/▶** to select your favorite satellite, and then press **OK**.
 - You cannot select “Next” unless you set the satellite broadcast in step 3.



- Press **▲/▼** to select “Next”, and then press **OK**.

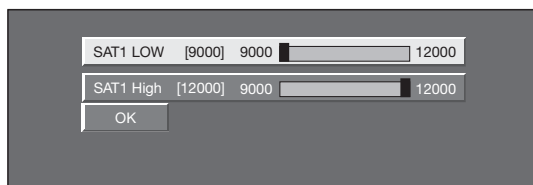


- Press **◀/▶** to select “Yes (0/22kHz)” or “No” to set the LNB frequency, and then press **OK**.



- Press **▲/▼** to select the item and press **◀/▶** to adjust 9,000 MHz to 12,000 MHz to the appropriate value.

EXAMPLE



- Press **▲/▼** to select “OK”, and then press **OK**.



After completing this setting, the screen switches to the DVB-S setting screen shown in the left column on page 14.

Checking signal strength and channel strength (DVB-T/C)

If you install a DVB-T/C antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.

- 1 Press **MENU** and the “MENU” screen displays.
- 2 Press **◀/▶** to select “Setup”.
- 3 Press **▲/▼** to select “Antenna Setup-DIGITAL”, and then press **OK**.
- 4 Press **▲/▼** to select “Digital Setup”, and then press **OK**.

● Checking signal strength

Press **▲/▼** to select “Signal Strength”, and then press **OK**.

Supply Voltage		
Signal Strength		
Channel Strength	CH No. 21 Signal Strength Current 0 Max 0 Quality Current 0 Max 0	

● Checking channel strength

Press **▲/▼** to select “Channel Strength”, and then press **OK**.

- You can input a specified frequency band using the 0–9 numeric buttons.

Channel strength of DVB-T

Supply Voltage	4 7 4 . 0 MHz	
Signal Strength		
Channel Strength	CH No. 21 Signal Strength Current 0 Max 0 Quality Current 0 Max 0	

Channel strength of DVB-C

Supply Voltage	Frequency 4 7 4 . 0 MHz	
Signal Strength	Symbol rate * * * *	
Channel Strength	QAM Modulation 64 Signal Strength Current 0 Max 0 Quality Current 0 Max 0	

- 5 Position and align the antenna so that the maximum possible values for “Signal Strength” and “Quality” are obtained.

NOTE

- The values of “Signal Strength” and “Quality” indicate when to check the appropriate alignment of the antenna.

Checking signal strength and channel strength (DVB-S)

If you install a DVB-S antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.

- 1 Press **MENU** and the “MENU” screen displays.
- 2 Press **◀/▶** to select “Setup”.
- 3 Press **▲/▼** to select “Antenna Setup-DIGITAL”, and then press **OK**.
- 4 Press **▲/▼** to select “Satellite Setup”, and then press **OK**.

● Checking signal strength

Press **▲/▼** to select “Signal Strength”, and then press **OK**.

Signal Strength		
Channel Strength	Signal Strength Current 0 Max 0 Quality Current 0 Max 0	

● Checking channel strength

Press **▲/▼** to select “Channel Strength”, and then press **OK**.

- You can input a specified frequency band using the 0–9 numeric buttons.

Channel strength of DVB-S



Signal Strength	Frequency 4 7 4 0 0 MHz	
Channel Strength	Symbol rate * * * * * Band Vert/Low Signal Strength Current 0 Max 0 Quality Current 0 Max 0	

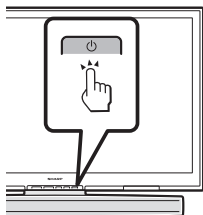
Watching TV

Daily operation


Switching on/off

Turning on/off the main power

Press  on the Display.
Switch it off by pressing  on the Display.





NOTE



- When turning off the main power using  on the Display, EPG data will be lost, and programmed timer recordings will not be performed by the TV.

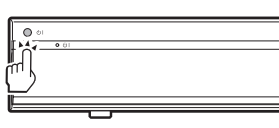
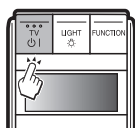
Standby mode

To standby mode


If the TV is switched on, you can switch it to standby by pressing **TV**  on the remote control unit or  on the AVC System.

Switching on from standby


From standby, press **TV**  on the remote control unit or  on the AVC System.



indicator status (Display/AVC System)

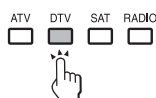
 indicator	Status
Off	Power off
Blue	Power on
Red	Standby

NOTE

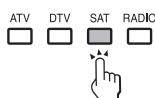
- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the AC outlet.
- A small amount of electric power is still consumed even when  is turned off.

Switching between digital, satellite and analogue broadcasts

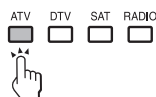
Watching digital broadcasts



Watching satellite broadcasts



Watching analogue broadcasts

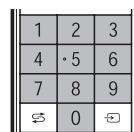


Changing channels




With **P**  :



With **0-9**:



Selecting an external video source

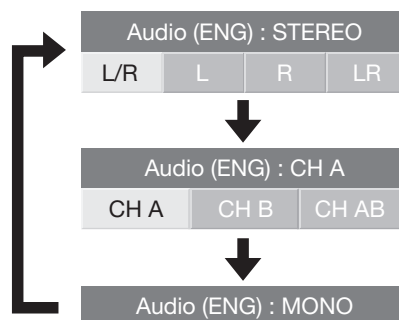
Once the connection is made, press  to display the "INPUT SOURCE" screen, and then press / to switch over to the appropriate external source with **OK**.



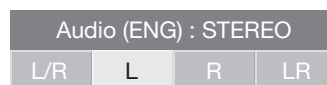
Selecting a sound mode

DTV/SAT mode:

If multi sound modes are received, each time you press  the mode switches as follows.




Press / to select L or R sound when the STEREO or DUAL MONO screen is displayed.



NOTE

- The sound mode screen disappears in six seconds.
- Selectable items vary depending on the received broadcasts.

ATV mode:

Each time you press , the mode switches as shown in the following tables.

NICAM TV broadcasts selection	
Signal	Selectable items
Stereo	NICAM STEREO, MONO
Bilingual	NICAM CH A, NICAM CH B, NICAM CH AB, MONO
Monaural	NICAM MONO, MONO
A2 TV broadcasts selection	
Signal	Selectable items
Stereo	STEREO, MONO
Bilingual	CH A, CH B, CH AB
Monaural	MONO

NOTE

- When no signal is input, the sound mode will display "MONO".

EPG

EPG is a programme list that is displayed on the screen. With the EPG, you can check the schedule of DTV/SAT/ RADIO/DATA, view detailed information about them, tune to an event currently on-air and set a timer for future events.

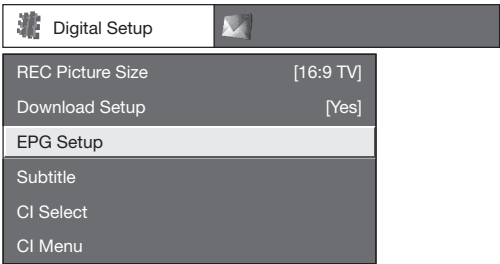
EPG Overview

- **Basic functions**
 - Select a programme using EPG (Page 19)
 - Check programme information (Page 19)
- **Useful functions**
 - Search for a programme by category (Page 19)
 - Search for a programme by date and time (Page 19)
 - Timer recording using EPG (Page 20)

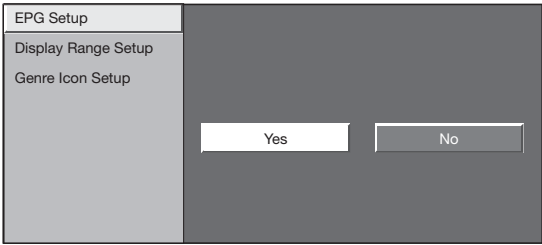
Useful settings for using EPG

Common Operation

- 1 Press **MENU** and the “MENU” screen displays.
- 2 Press **◀/▶** to select “Digital Setup”.
- 3 Press **▲/▼** to select “EPG Setup”, and then press **OK**.



- 4 Press **▲/▼** to select the desired item, and then press **OK** (Example: “EPG Setup”, “Display Range Setup”, etc.).



- 5 Press **▲/▼/◀/▶** to select or adjust the desired item, and then press **OK** (Example: “Yes”, “No”, etc.).

EPG display settings

● **EPG Setup (setting for receiving EPG data)**

If you want to use the EPG for digital stations, select “Yes”. The EPG data must be automatically captured while the TV is in standby mode. After setting to “Yes”, it may take some time to turn off the power using the remote control unit due to the process of the data capture.

NOTE

- If the main power is switched off, the EPG data will not be captured.

● **Display Range Setup**

The “Display Range Setup” allows you to select three types of time spans for display on the screen.

Item

Mode1: Displays six hours of programme information.

Mode2: Displays three hours of programme information.

Mode3: Changes to the EPG display format with a vertical time span.

● **Genre Icon Setup**

You can grey out or place a mark on desired genres and smoothly search for programmes you frequently watch.

● **Genre Icon List**

Icon	Genre	Icon	Genre
	Movie/Drama		Music/Ballet/Dance
	News/Current affairs		Arts/Culture (without music)
	Show/Game show		Social/Political Issues/Economics
	Sports		Education/Science/Factual topics
	Children's/Youth programmes		Leisure hobbies

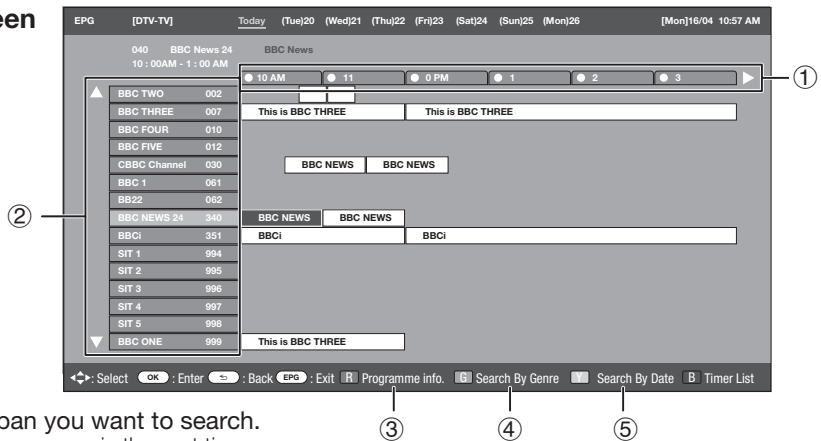
Selecting a programme using EPG

Basic Operation

The illustrations on this page are explained using three digit services.

● Display/Close the EPG screen

Press **EPG**.



● Select a programme

① Select the time span

Press **◀/▶** to select the time span you want to search.

- Continue to press **▶** to display programmes in the next time span.

② Select the desired programme

Press **▲/▼** to select the desired programme.

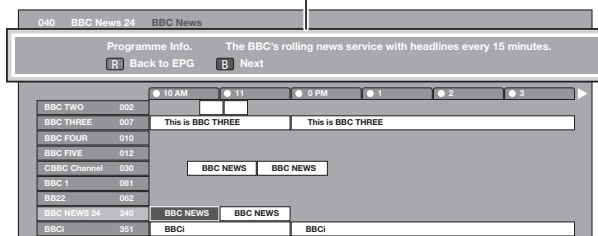
- If **▲** or **▼** are displayed on the left of the services, continue to press **▲/▼** to display next or previous screen.

Selecting a programme

③ Check programme information

- 1 Press **▲/▼/◀/▶** to select the programme you want to check.
- 2 Press **R**.

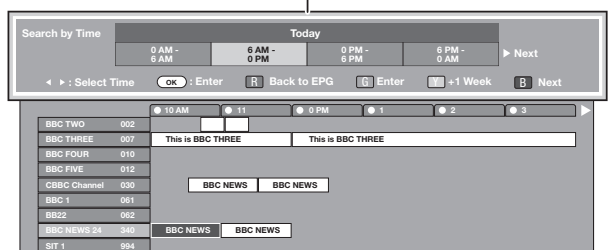
Programme Information



⑤ Search for a programme by date/time

- 1 Press **Y**.
- 2 Press **◀/▶** to select the desired time span, and then press **OK**.

Date/Time

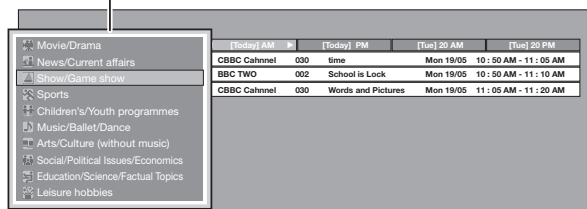


- 3 Press **OK** to tune to the selected programme.

④ Search a programme in a category

- 1 Press **G**.
- 2 Press **▲/▼** to select the desired genre, and then press **OK**.
- 3 Press **▲/▼** to select a programme you want to watch, and then press **OK**.

Genre



- Refer to page 18 for the genre setting.

- 3 Press **▲/▼** to select the desired programme, and then press **OK**.

NOTE

- When you select a programme outside of the current time span, the timer setting screen is displayed (Page 20).

Timer recording using EPG

You can record TV programmes using data from the EPG.

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme you want to record, and then press **OK**.
- 3 Press **◀/▶** to select the preferred timer setting, and then press **OK**.



- If you select "No", the TV returns to the EPG screen.

● Watching a programme at a set time

- 1 Press **◀/▶** to select "Watch", and then press **OK**.
- 2 Press **◀/▶** to select "Yes", and then press **OK**.
 - The selected TV programme is marked with an icon.

● Recording a programme at a set time

- 1 Press **◀/▶** to select "Record", and then press **OK**.
- 2 Press **◀/▶** to select the preferred timer recording type, and then press **OK**.

Item

AQUOS LINK: Records a programme at a set time when a device compatible with AQUOS LINK is connected.

AV LINK: Records a programme at a set time when a device compatible with AV LINK is connected.

VHS tape: Records a programme at a set time when a device compatible with VHS tape is connected.

- 3 Press **◀/▶** to select "Yes", and then press **OK**.
 - The selected TV programme is marked with an icon.

NOTE

- Refer to pages 22–25 and 27–28 for connecting external devices.

Cancelling the timer recording

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme on timer setup, and then press **OK**.
- 3 Press **◀/▶** to select "Cancel", and then press **OK**.
- 4 Press **◀/▶** to select "Yes", and then press **OK**.

● Cancelling using the B button on the remote control unit




- 1 Press **EPG**.
- 2 Press **B** to display the timer recording screen.
- 3 Press **▲/▼** to select a programme with a set timer recording you want to change, and then press **OK**.
- 4 Press **◀/▶** to select "Cancel" and then press **OK**.
- 5 Press **◀/▶** to select "Yes", and then press **OK**.

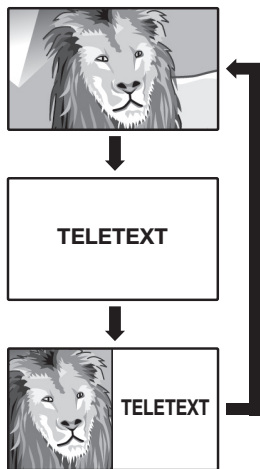
Teletext

What is Teletext?

Teletext broadcasts pages of information and entertainment to specially equipped TV. Your TV receives teletext signals broadcast by a TV network, and decodes them into graphical format for viewing. News, weather and sports information, stock exchange prices and programme previews are among the many services available.

Turning Teletext on/off








- 1
- Select a TV channel or external source providing a teletext programme.
- 2
- Press  to display the Teletext.
- Many stations use the TOP operating system, while some use FLOF (e.g. CNN). Your TV supports both these systems. The pages are divided into topic groups and topics. After switching on the teletext, up to 2,000 pages are stored for fast access.
 - Each time you press , the screen switches as shown below.
 - Press  again to display the teletext on the right screen and the normal image on the left screen.
 - If you select a programme with no teletext signal, "No Teletext available" displays.
 - The same message displays during other modes if no teletext signal is available.




NOTE

- Teletext will not work if the selected signal type is RGB (Page 41).

Buttons for teletext operations

Buttons	Description
P  	Increase or decrease the page number.
Colour (R/G/Y/B)	Select a group or block of pages displayed in the coloured brackets at the bottom of the screen by pressing the corresponding Colour (R/G/Y/B) on the remote control unit.
0-9	Directly select any page from 100 to 899 by using the 0-9 numeric buttons.
 (Top/Bottom/Full)	Switch the teletext image to Top, Bottom or Full.
 (Reveal hidden Teletext)	Reveal or hide hidden information such as an answer to a quiz.
 (Freeze/Hold)	Stop updating teletext pages automatically or release the hold mode.
 (Subtitle for Teletext)	Display the subtitle or exit the subtitle screen. <ul style="list-style-type: none">Subtitles will not be displayed when the service does not contain subtitle information.
 (Subpage)	Reveal or hide subpages. <ul style="list-style-type: none">R button: Move to the previous subpage.G button: Move to the following subpage.These two buttons are shown on the screen by the symbols “+” and “-”.

Using the MHEG-5 application (UK only)

Some services bring you programmes with the MHEG application encoded, letting you experience DTV/SAT interactively. When provided, the MHEG-5 application will start when you press .

Sample MHEG-5 screen



Connecting external devices

● Before connecting ...

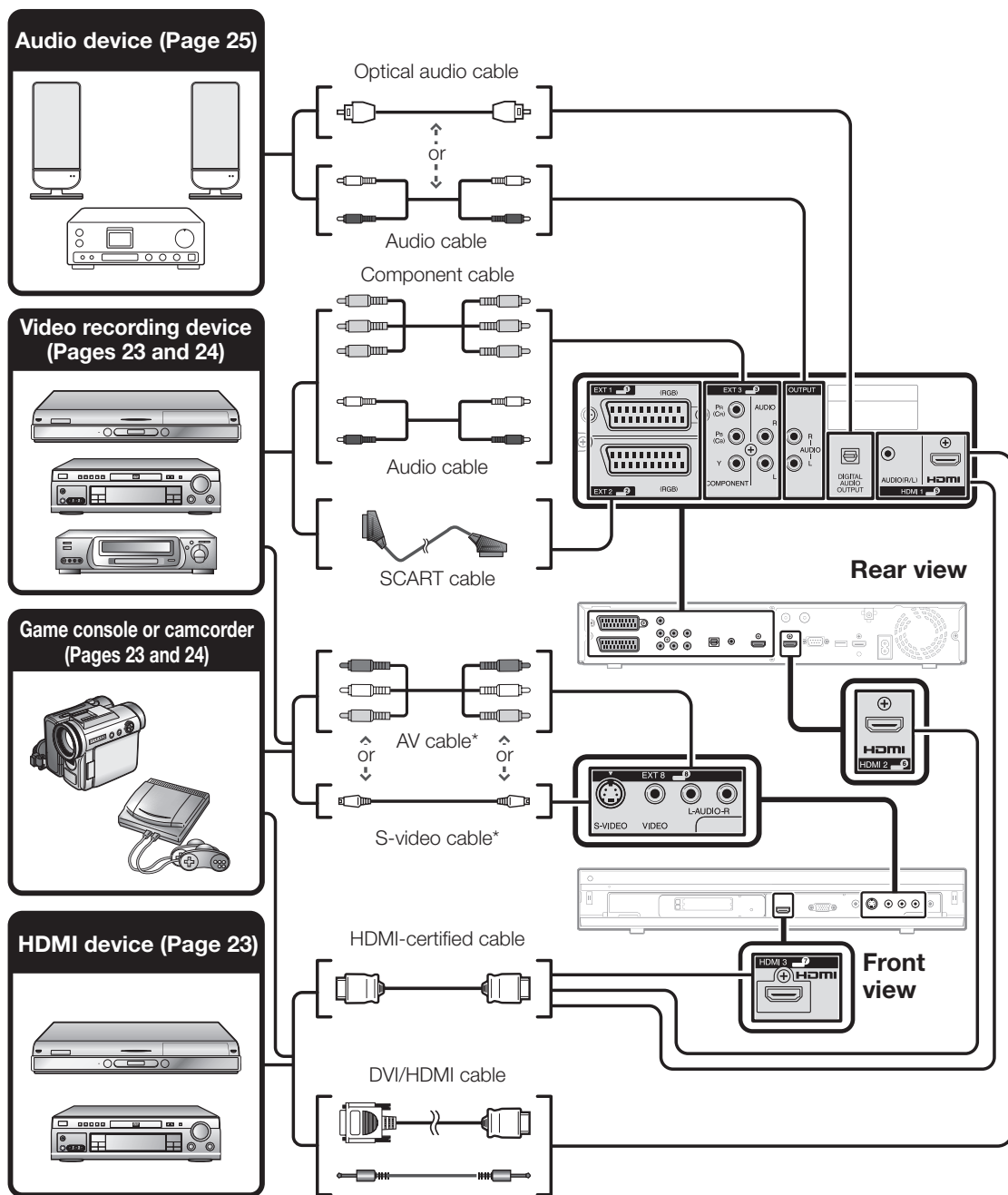
- Be sure to turn off the TV and any devices before making any connections.
- Firmly connect a cable to a terminal or terminals.
- Carefully read the operation manual of each external device for possible connection types. This also helps you get the best possible audiovisual quality to maximise the potential of the TV and the connected device.
- Refer to page 46 for connecting a PC to the AVC System.

Introduction to connections

The AVC System is equipped with the terminals as shown below. Find the cable corresponding the terminal and connect the device.

NOTE

- The cables illustrated in pages 22–25 are commercially available items.



ø 3.5 mm stereo minijack cable

* When using an S-video cable, you also need to connect an audio cable (R/L).

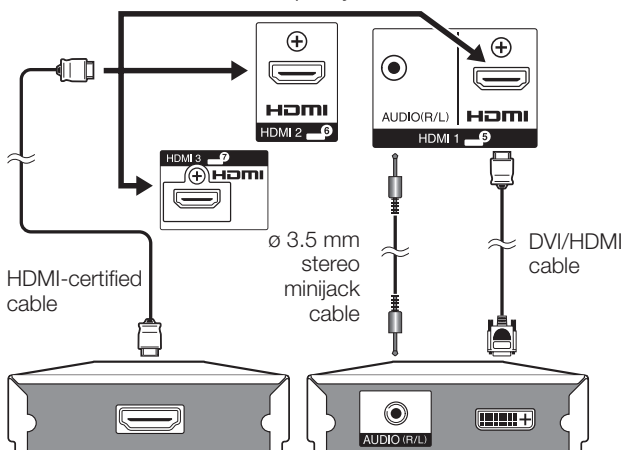
Connecting external devices

HDMI connection

Example of connectable devices

- DVD player/recorder ● Blu-ray player/recorder
- Game console

The HDMI connections permit digital video and audio transmission via a connection cable from a player/recorder. The digital picture and sound data are transmitted without data compression and therefore lose none of their quality. Analogue/digital conversion is no longer necessary in the connected devices, which also would result in quality losses.



DVI/HDMI conversion

Using a DVI/HDMI cable, the digital video signals of a DVD can also be played via the compatible HDMI connection. The sound must be fed in additionally.

- When connecting a DVI/HDMI cable to the HDMI terminal, the image may not come in clearly.
- Both HDMI and DVI use the same HDCP copy protection method.

After connecting

HDMI Audio Select

After connecting, you must set the audio signal compatible with the cable you use for the HDMI device.

- 1 Go to "MENU" > "Option" > "HDMI Audio Select".
- 2 Select "Digital" for audio signals via the HDMI terminal. Select "Analogue" for audio signals via the AUDIO jack (HDMI1).

NOTE

- If a connected HDMI device is AQUOS LINK compatible, you can take advantage of versatile functions (Pages 27–29).
- Video noise may occur depending on the type of HDMI cable used. Make sure to use a certified HDMI cable.
- When playing the HDMI image, the best possible format for the picture will be detected and set automatically.

Supported video signal:

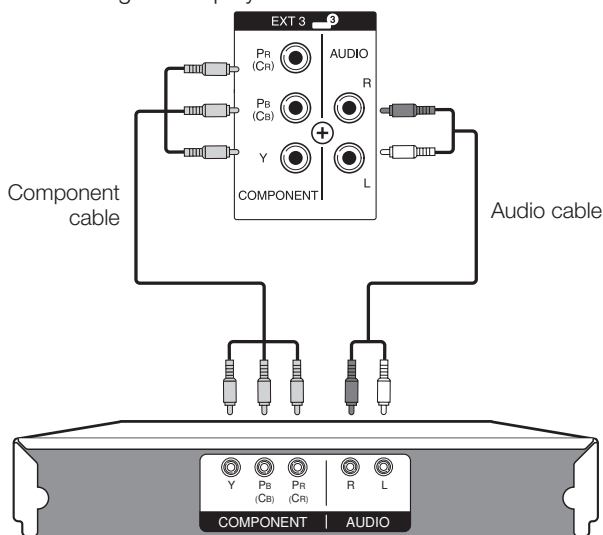
576i, 576p, 480i, 480p, 1080i, 720p, 1080p
See page 49 for PC signal compatibility.

Component connection

Example of connectable devices

- VCR ● DVD player/recorder
- Blu-ray player/recorder

You will enjoy accurate colour reproduction and high quality images through the EXT3 terminal when connecting a DVD player/recorder or other device.

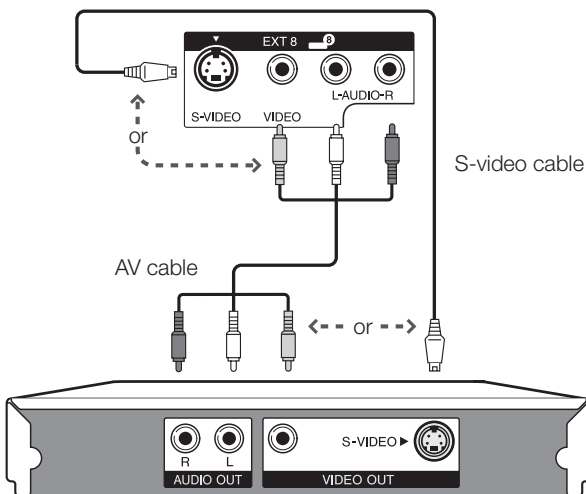


S-VIDEO/VIDEO connection

Example of connectable devices

- VCR ● DVD player/recorder
- Blu-ray player/recorder
- Game console ● Camcorder

You can use the EXT8 terminal when connecting to a game console, camcorder, a DVD player/recorder or other device.



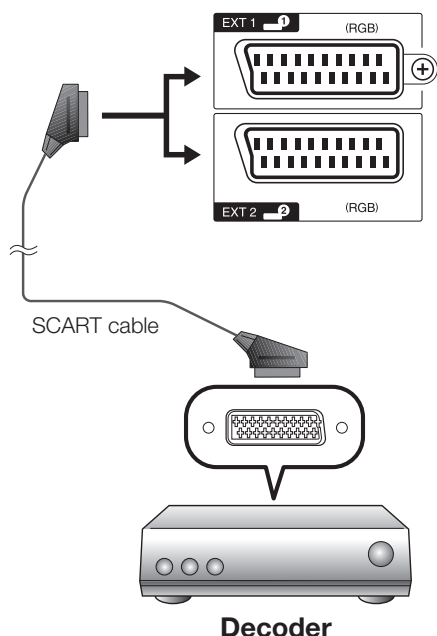
NOTE

- When using an S-video cable, you also need to connect an audio cable (R/L).
- EXT8: The S-VIDEO terminal has priority over the VIDEO terminal.

SCART connection

Example of connectable devices

- Decoder

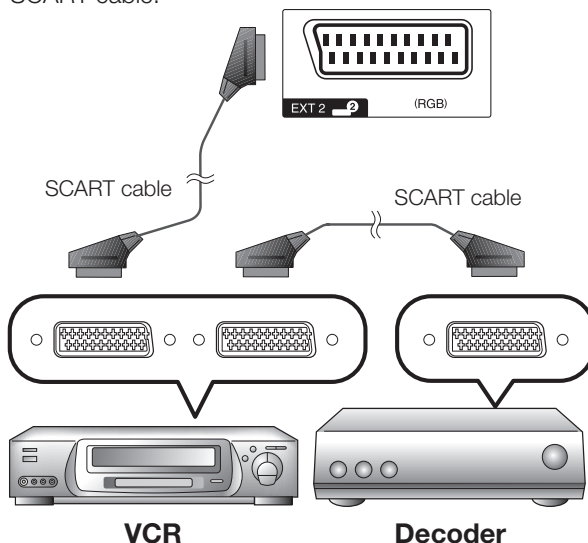


Example of connectable devices

- VCR
- DVD player/recorder

When using the EXT2 (SCART) terminal

If your VCR supports TV-VCR advanced AV Link systems, you can connect the VCR using a fully wired SCART cable.



NOTE

- In cases when the decoder needs to receive a signal from the TV, make sure to select the appropriate input terminal to which the decoder is connected in "Manual Adjust" in the "Analogue Setting" menu (Page 36).
- TV-VCR advanced AV Link systems may not be compatible with some external sources.
- You cannot connect the VCR with decoder using a fully wired SCART cable when selecting "Y/C" under "EXT2" in the "Input Select" menu.

Controlling devices with SCART using AV Link

This TV incorporates four typical AV Link functions for smooth connections between the AVC System and other audiovisual equipment.

One Touch Play

While the TV is in standby mode, it automatically turns on and plays back the image from the audiovisual source (e.g. VCR, DVD player/recorder).

TV Standby

When the TV enters standby mode, the connected audiovisual equipment (e.g. VCR, DVD player/recorder) enters standby mode as well.

WYSIWYR

When the remote control unit of the connected VCR has the WYSIWYR button, you can automatically start recording by pressing the WYSIWYR button.

Preset Download

Automatically transfers the channel preset information from the AVC System to the one on the connected audiovisual equipment (e.g. VCR) via the EXT2 terminal.

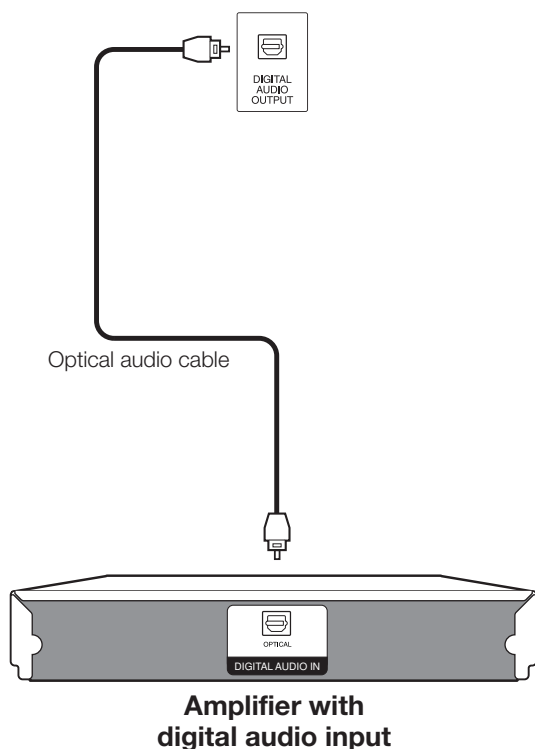
NOTE

- Refer to the operation manuals of external equipment for details.
 - The AV Link function works only when audiovisual equipment is connected to the EXT2 terminal with a fully wired SCART cable.
 - The use of the AV Link function is only possible if the TV has enforced a complete auto installation with the connected audiovisual equipment (Pages 11–15, Initial auto installation).
- The availability of the AV Link function depends on the audiovisual equipment used. Depending on the manufacturer and type of equipment used, it is possible that the described functions may be completely or partially unusable.

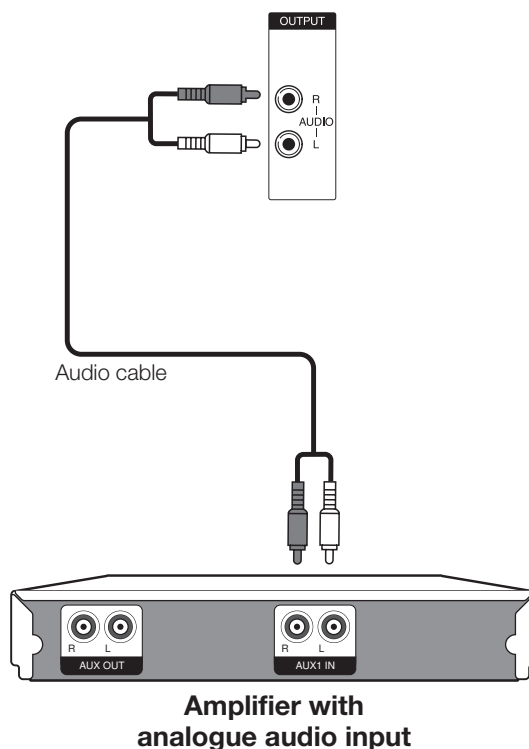
Speaker/amplifier connection

Connect an amplifier with external speakers as shown below.

● Connecting an amplifier with digital audio input



● Connecting an amplifier with analogue audio input



● After connecting

Digital audio output setting

After connecting an amplifier with digital audio input and external speakers as shown, you should set an audio output format compatible with the programme you are watching or the device connected.

Go to “MENU” > “Option” > “Digital Audio Output” > select “PCM” or “Dolby Digital”.

NOTE

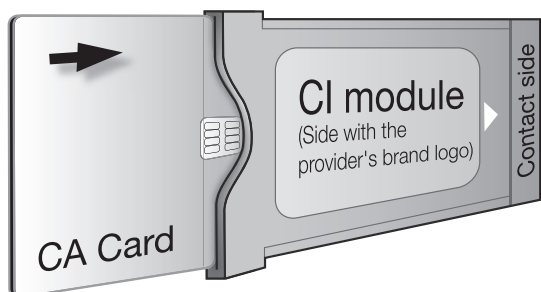
- When you set this to “Dolby Digital”, and you receive the Dolby Digital or Dolby Digital Plus audio formats, Dolby Digital audio is output. Otherwise, PCM audio is output. When you set this to “PCM”, PCM audio is output no matter what audio formats you receive.

Inserting a CA Card

In order to receive coded digital stations, a Common Interface Module (CI Module) and a CA Card must be inserted in the CI slot of the AVC System (See below). The CI Module and the CA Card are not supplied accessories. They are usually available from your dealers.

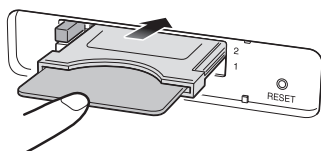
Inserting the CA Card into the CI Module

- 1 With the side with the gold coloured contact chip facing the side of the CI Module marked with the provider's logo, push the CA Card into the CI Module as far as it will go. Note the direction of the arrow printed on the CA Card.



Inserting the CI Module in the CI slot

- 2 Carefully insert the CI Module in the CI slot with the contact side facing forward. The logo on the CI Module must be facing upward. Do not use excessive force. Make sure the module is not bent in the process.



Checking CI Module information

NOTE

- Make sure that the CI Module is properly inserted.
- This menu is only available for digital stations.

- 1 Press **MENU** and the "MENU" screen displays.
- 2 Press **◀▶** to select "Digital Setup".
- 3 Press **▲▼** to select "CI Menu", and then press **OK**.
 - The content of this menu depends on the provider of the CI Module.

Module

General information on CI Module displays.

Menu

Adjustment parameters of each CA Card displays.

Enquiry

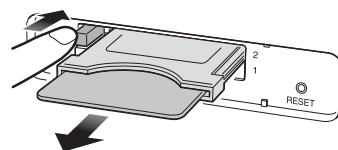
You can input numerical values such as passwords here.

NOTE

- The content of each screen depends on the provider of the CI Module.

Removing the CI Module

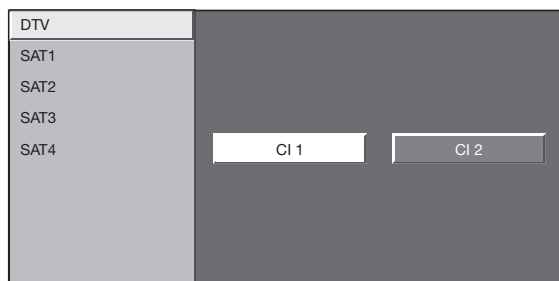
- 1 Remove the CI slot cover.
- 2 Press the **EJECT** button to pop out the CI module from the CI slot.



Selecting CI slot

The AVC System has two CI slots. You should select which CI slot is used for each broadcast standard.

- 1 Press **MENU** and the "MENU" screen displays.
- 2 Press **◀▶** to select "Digital Setup".
- 3 Press **▲▼** to select "CI Select", and then press **OK**.
- 4 Press **▲▼** to select the broadcast standard (DTV or SAT1, etc), and then press **OK**.



- 5 Press **◀▶** to select "CI 1" or "CI 2", and then press **OK**.

AQUOS LINK

Controlling HDMI devices using AQUOS LINK

What is AQUOS LINK?



Using the HDMI CEC protocol, with AQUOS LINK you can interactively operate compatible system devices (AV amplifier, DVD player/recorder, Blu-ray player/recorder) using a single remote control unit.

NOTE

- AQUOS LINK-compatible AQUOS AUDIO speaker system and AQUOS Recorder are scheduled to be on sale after the release of this TV (as of October 2008).

What you can do with AQUOS LINK

✓ One Touch Recording (DTV/SAT only)

You do not have to search for the remote control unit of your recording device. Press the **REC**  or **REC STOP**  buttons inside the flip cover to start/stop recording what you see on the recorder.

✓ One Touch Play

When the TV is in standby mode, it will automatically turn on and play back the image from the HDMI source.

✓ Single remote control operation

AQUOS LINK automatically recognises the connected HDMI devices and you can control the TV and the devices as if using a universal remote control unit.


✓ Operating Title list of external devices

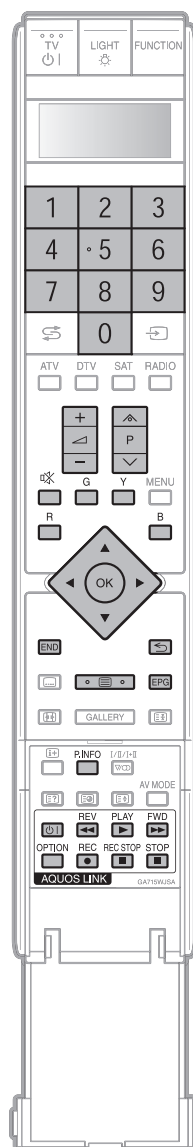
In addition to displaying the TV's own Timer list (Page 19), you can also call up the external player's Top menu or AQUOS BD Player's/AQUOS Recorder's Title list provided that the devices support AQUOS LINK.

✓ Multiple control of HDMI devices

You can select which HDMI device to operate using the **OPTION** button.

NOTE


- When you use AQUOS LINK, make sure to use a certified HDMI cable.
- Point the remote control unit toward the Display, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI cable used. Make sure to use a certified HDMI cable.
- Up to three HDMI recording devices, one AV amplifier and two players can be connected using this system.
- These operations affect the HDMI device selected as the current external source. If the device does not operate, turn on the device and select the appropriate external source using .
- When you insert/remove HDMI cables or change connections, turn on all connected HDMI devices before turning on the TV. Confirm that picture and audio are correctly output by selecting "HDMI1", "HDMI2" or "HDMI3" from the "INPUT SOURCE" menu.



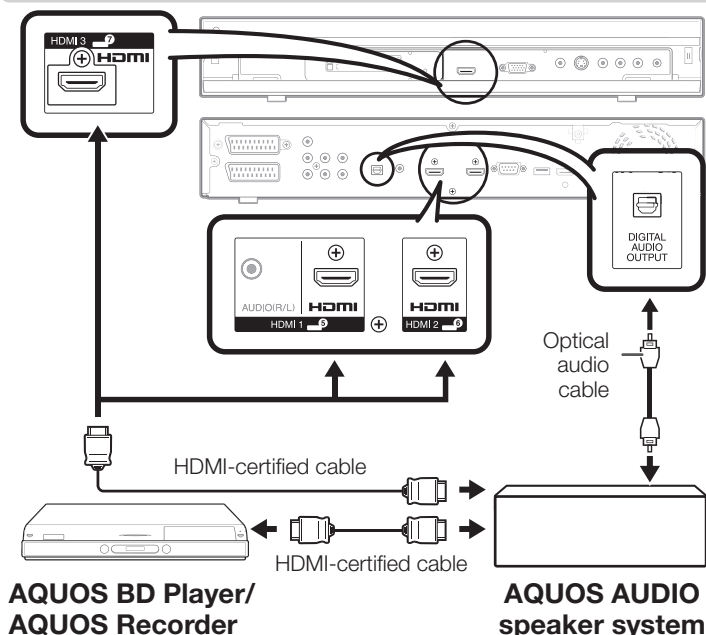
AQUOS LINK connection

First connect the AQUOS AUDIO speaker system or an AQUOS BD Player/AQUOS Recorder that supports the HDMI CEC protocol.

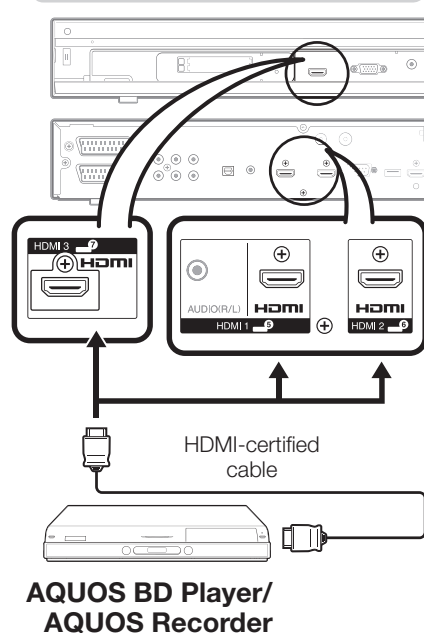
NOTE

- Refer to the operation manual of the device to be connected for further details.
- After unplugging connection cables or changing the connection pattern, turn on the main power of the Display after all relevant devices' power have been turned on. Change the external input source by pressing , select the appropriate external source and verify the audiovisual output.
- The cables illustrated in the following explanation are commercially available items.

Connecting an AQUOS BD Player/AQUOS Recorder via the AQUOS AUDIO speaker system



Connecting an AQUOS BD Player/AQUOS Recorder only



AQUOS LINK Setup

AQUOS LINK Control

Set to "On" to enable AQUOS LINK functions.

- 1 Press **MENU** and the "MENU" screen displays.
- 2 Press **◀/▶** to select "Option".
- 3 Press **▲/▼** to select "AQUOS LINK Setup", and then press **OK**.
- 4 Press **▲/▼** to select "AQUOS LINK Control", and then press **OK**.
- 5 Press **◀/▶** to select "On", and then press **OK**.

Auto Power On

If this is activated, the One Touch Play function is enabled. While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Control**.
- 2 Press **▲/▼** to select "Auto Power On", and then press **OK**.
- 3 Press **◀/▶** to select "On", and then press **OK**.

NOTE

- The factory default for this item is "Off".

Selecting Recorder

Here, you can select a recorder for the recording from several connected recorders.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Control**.
- 2 Press **▲/▼** to select "Selecting Recorder", and then press **OK**.

- 3 Select the recorder, and then press **OK**.

NOTE

- If you have connected the AQUOS AUDIO speaker system between the AVC System and an AQUOS Recorder, the external source's indication changes (e.g. from "HDMI1" to "HDMI1 (Sub)").

Selecting Channel Key

This function allows you to select the channel of the connected HDMI device using the TV's remote control unit.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Control**.
- 2 Press **▲/▼** to select "Selecting Channel Key", and then press **OK**.
- 3 Press **▲/▼** to select the input source of the connected HDMI device you want to control using the TV's remote control unit, and then press **OK**.
- 4 Press **◀/▶** to select "On", and then press **OK**.

Using Genre Info.

This function allows you to automatically switch to the appropriate sound mode depending on the genre information included the digital broadcast.

- 1 Repeat steps 1 to 3 in **AQUOS LINK Control**.
- 2 Press **▲/▼** to select "Using Genre Info.", and then press **OK**.
- 3 Press **◀/▶** to select "On", and then press **OK**.

Operating an AQUOS LINK device

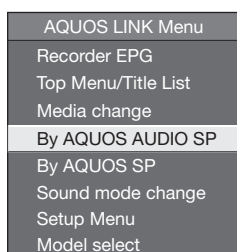
AQUOS LINK allows you to operate the HDMI-connected device with a single remote control unit.

- 1 Open the remote control unit's flip cover.
- 2 Press **PLAY ▶** to start playback of a title.
 - See the right column, section "**Playback of titles using AQUOS LINK**" if you want to start playback using the list of the titles of the AQUOS BD Player/AQUOS Recorder.
- 3 Press **FWD ▶▶** to fast forward.
 Press **REV ◀◀** to reverse.
 Press **STOP ■** to stop.
 Press **⏻** to turn the HDMI-connected device on/off.

Listening with the AQUOS AUDIO speaker system

You can choose to listen to the TV sound only from the AQUOS AUDIO speaker system.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.



- 2 Press **▲/▼** to select "By AQUOS AUDIO SP", and then press **OK**.
 - The sound from the TV speaker and headphone terminal is silenced and only the sound from the AQUOS AUDIO speaker system is audible.

Listening with the AQUOS TV speaker system

You can choose to listen to the TV sound only from the AQUOS TV speaker system.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "By AQUOS SP", and then press **OK**.

Manually changing the AQUOS AUDIO speaker system's sound mode

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Sound mode change".
- 3 The sound mode changes every time you press **OK**.
 - Refer to the operation manual of the AQUOS AUDIO speaker system for details.

Calling up the menu of an external device connected with the TV via HDMI

You can call up the menu of an HDMI CEC-compatible external device (player, recorder, decoder, etc.) using the "Setup Menu" function.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Setup Menu", and then press **OK**.

NOTE

- If a connected device does not have this function or the device is in a status where the menu cannot be displayed (recording, entering standby, etc.), this function may not be available.

Playback of titles using AQUOS LINK

This section explains how to play back a title in the AQUOS BD Player/AQUOS Recorder.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Top Menu/Title List", and then press **OK**.
 - The linked recorder now powers on and the TV automatically selects the appropriate external input source.
 - The title list data from the connected AQUOS BD Player/AQUOS Recorder displays.
- 3 Select the title with **▲/▼/◀/▶**, and then press **PLAY ▶**.

Selecting media type for CEC-compatible recorder

If your recorder has multiple storage media, select the media type here.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Media change", and then press **OK**.
- 3 Select the desired medium, such as DVD recorder or HDD. The media type changes every time you press **OK**.

HDMI device selection

If multiple HDMI devices are connected in a daisy chain, you can specify which device to control here.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Model select", and then press **OK**. The HDMI device changes every time you press **OK**.

Recording via the AQUOS Recorder EPG (only for recorders)

You can call up the CEC-compatible recorder's EPG and preset timer recordings using the TV's remote control unit.

- 1 Open the remote control unit's flip cover, and then press **OPTION**.
- 2 Press **▲/▼** to select "Recorder EPG", and then press **OK**.
 - The external input source switches and the recorder's EPG is displayed.
- 3 Select the programme to record.
 - Refer to the operation manual of the recorder for details.

Menu operation

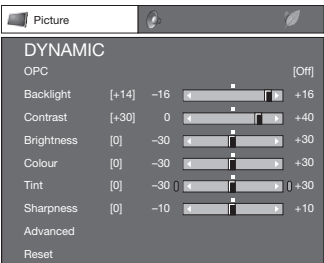
What is the MENU?

- You need to call up the OSD to perform settings for the TV. The OSD for the settings is called “MENU”.
- The “MENU” enables various settings and adjustments.
- The “MENU” can be operated with the remote control unit.

Common operations

1 Display the MENU screen

Press **MENU** and the “MENU” screen displays.

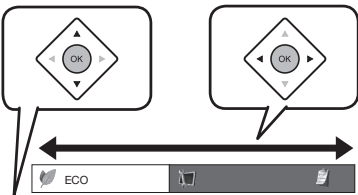


2 Select an item

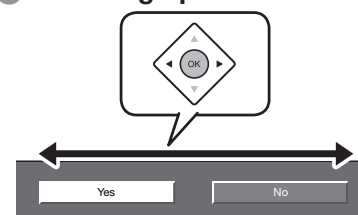
Press **▲/▼/◀/▶** to select/adjust the desired menu, and adjust the item to the desired level, and then press **OK**.

Press **↶** to return to the previous “MENU” page.

Selecting in the MENU

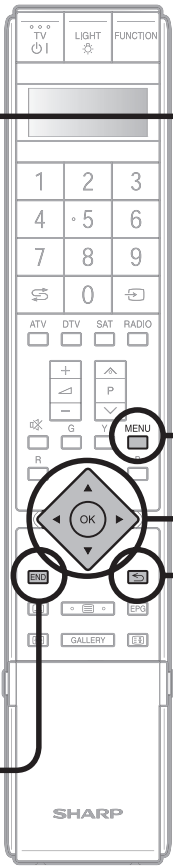


Selecting options




3 Exit the MENU screen

The operation will exit the “MENU” screen if you press **END** before it is completed.



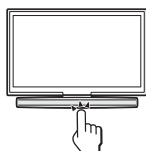
NOTE

- “MENU” options differ in the selected input modes, but the operating procedures are the same.
- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.
- Items with  cannot be selected for various reasons.

Operation without a remote control unit

This function is useful when there is no remote control unit within your reach.

- 1 Press **MENU** and the “MENU” screen displays.
- 2 Press **P▲/▼** instead of **▲/▼** or **◀/▶** instead of **◀/▶** to select the item.
- 3 Press **→** to complete the setting.



NOTE

- The “MENU” screen will disappear if left unattended for several seconds.

About the Guide Display

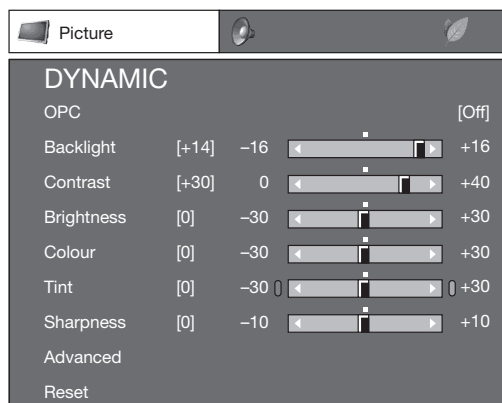
The Guide Display at the bottom of the screen shows operations with the OSD.



The bar above is an operational guide for the remote control unit. The bar will change in accordance with each menu setting screen.

Basic adjustment

Picture Settings



Picture OPC

Automatically adjusts the brightness of the screen.

Item

- Off:** The brightness is fixed at the value set in "Backlight".
On: Automatically adjusts.
On:Display: Displays the OPC effect on the screen while adjusting the brightness of the screen.

NOTE

- When set to "On", the TV senses the surrounding light and automatically adjusts the backlight brightness. Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.



Picture Picture adjustments

Adjusts the picture to your preference with the following picture settings.

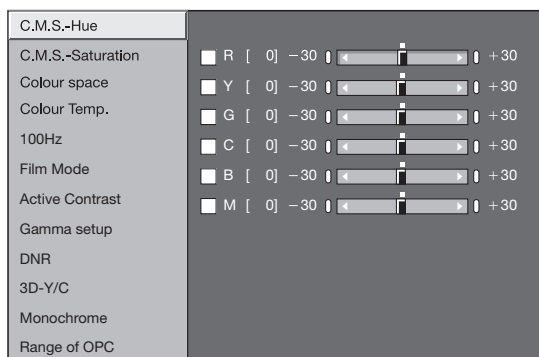
Adjustment items

Selectable items	◀ button	▶ button
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Colour	For less colour intensity	For more colour intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness



Picture Advanced

This TV provides various advanced functions for optimising the picture quality.



C.M.S.-Hue

This function adjusts the hue of a selected colour using a six-colour adjustment system.

C.M.S.-Saturation

This function increases or decreases the saturation of a selected colour using a six-colour adjustment system.

Colour space

You can select the range of colour for reproducing colour combinations.

Item

- Standard:** Reproduces standard colour.
Advanced: Reproduces brighter colour, taking advantage of the backlight.

Colour Temp.

Adjusts the colour temperature to give the best white image.

Item

- High:** White with bluish tone.
Mid-High: Intermediate tone between "High" and "Middle".
Middle: Natural tone.
Mid-Low: Intermediate tone between "Middle" and "Low".
Low: White with reddish tone.
R Gain/G Gain/B Gain: Adjusts the white balance by changing the value of "R Gain", "G Gain" or "B Gain".

100Hz

"100Hz" technology provides superior solutions for digital display picture quality removing motion blur.

NOTE

- This effect is greater on fast moving images.
- "100 Hz" will have no effect in the following cases;
 - The type of signal received is a PC signal.
 - An OSD is being displayed.
 - Teletext is activated.
- If images appear blurred, set the "100Hz" to "Off".

Basic adjustment

Film Mode

Automatically detects a film-based source (originally encoded at 24 or 25 frames per second, depending on the vertical frequency), analyses it and then recreates each still film frame for high-definition picture quality.

Active Contrast

Automatically adjusts the contrast of an image according to the scene.

Gamma setup

Select the tone difference of the brightness and darkness of the picture according to the type of programme watched from the four items ("Mode1", "Mode2", "Mode3" or "Mode4").

NOTE

- When "AV MODE" is set to "x.v.Colour" or "PC", you can not change the gamma selection.

DNR

"DNR" produces a clearer image ("Off", "High", "Middle", "Low").

3D-Y/C

Provides high quality images with minimal dot crawl and cross colour noise by detecting changes in the image.

Item

Standard: Normal adjustment.

Fast: Sets the optimum image quality for fast-moving images.

Slow: Sets the optimum image quality for slow-moving images.

NOTE

- "3D-Y/C" may not operate depending on the input signal type or when the input signal is noisy.
- "3D-Y/C" has even more effect on composite video signals (CVBS).

Monochrome

For viewing a video in black & white.

Range of OPC

The brightness level range of the OPC sensor's automatic adjustments can be set according to your preferences. The adjustment range of the OPC sensor can be set to a maximum of +16 and a minimum of -16.

Selectable items	Description
Max.	-16 through +16
Min.	-16 through +16

NOTE

- This function is available only when the "OPC" setting is set to "On" or "On:Display".
- The maximum setting cannot be set to a smaller number than the minimum setting.
- The minimum setting cannot be set to a bigger number than the maximum setting.
- The maximum and minimum settings cannot be set to the same number.
- Depending on the brightness of the surrounding light, the OPC sensor might not operate if the adjustment range is small.

AV MODE

"AV MODE" gives you several viewing options to choose from to best match the system environment, which can vary due to factors like room-brightness, type of programme watched or the type of image input from external equipment.

1 Press **AV MODE**.

2 Each time you press **AV MODE**, the mode changes.

- You can also switch the mode on the "Picture" and "Audio" menu screen by pressing **AV MODE**.

Item

STANDARD: For a highly defined image in a normally bright room.

MOVIE: For viewing a movie in a darkened room.

MOVIE (Living room): For viewing a movie such as CG animation with dynamic picture quality.

GAME: For playing of video games.

PC*: For PC.

x.v.Colour:** Produce realistic colour on the TV screen unlike any other signal.

USER: Allows you to customise settings as desired. You can set the mode for each input source.

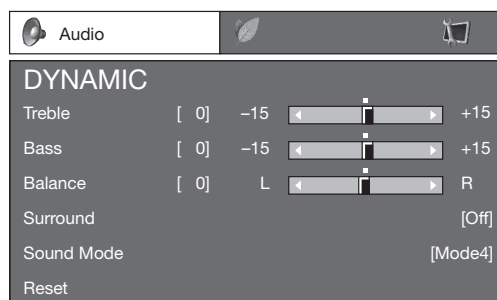
DYNAMIC (Fixed): For a clear-cut image emphasising high contrast for sports viewing (The "Picture" and "Audio" settings cannot be adjusted).

DYNAMIC: For a clear-cut image emphasising high contrast for sports viewing.

NOTE

- The item marked with * is available only when selecting "HDMI1", "HDMI2", "HDMI3" or "EXT4" from the "INPUT SOURCE" menu.
- The item marked with ** is available only when accepting an "x.v.Colour" signal through an HDMI terminal.

Audio Settings



Audio

Audio adjustment

You can adjust the sound quality to your preference with the following settings.

Selectable items	◀ button	▶ button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Decrease audio from the right speaker	Decrease audio from the left speaker

Basic adjustment

Audio
Surround

This function allows you to enjoy realistic live sound.

Audio
Sound Mode

This function allows you to select the sound mode depending on the type of programme watched.

Item

- Mode1:** For viewing movie and documentary programmes.
- Mode2:** For viewing music and sports programmes.
- Mode3:** For viewing news and variety programmes.
- Mode4:** Normal viewing mode.

Power Save Settings

ECO

Energy Save [Standard]

No Signal Off [Disable]

No Operation Off [Disable]

Sleep Timer

ECO
Energy Save

This function enables you to automatically reduce the backlight brightness in order to decrease the power consumption and increase the backlight life span.



Item

- Standard:** Reduces the backlight brightness by 20%.
- Advanced:** Reduces the backlight brightness by 30%.
- Off:** The backlight brightness is the same value of your settings in the selected "AV MODE".

NOTE

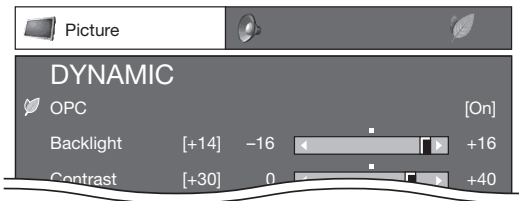
- This function does not work when "AV MODE" is set to "DYNAMIC (Fixed)".

● "Energy Save" status icons

Icon	Description
	"Energy Save" is set to "Standard".
	"Energy Save" is set to "Advanced".

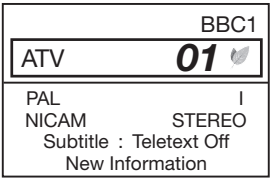
When "Energy Save" is set to "Standard" or "Advanced", "Energy Save" status icons appear in the "Picture" menu and channel information windows as shown in the right column.

EXAMPLE



- When "OPC" is set to "On" or "On:Display", an "Energy Save" status icon appears to the left of "OPC" in the "Picture" menu.
- When "OPC" is set to "Off", an "Energy Save" status icon appears to the left of "Backlight" in the "Picture" menu.

EXAMPLE



ECO
No Signal Off

When set to "Enable", the TV will automatically enter standby mode if there is no signal input for 15 minutes.

- Five minutes before the TV enters standby mode, the remaining time displays every minute.

NOTE

- Even if a TV programme finishes, this function may not operate because of interference from other TV stations or other signals.

ECO
No Operation Off

The TV will automatically enter standby mode if no operations are performed during the time span you set ("30min." or "3hr.").

- Five minutes before the TV enters standby mode, the remaining time displays every minute.

ECO
Sleep Timer

Allows you to set a time when the TV automatically enters standby mode.

NOTE

- Select "Off" to cancel the sleep timer.
- When the time has been set, countdown automatically starts.
- Five minutes before the preset of time expires, the remaining time displays each minute.

Channel Settings

Auto Installation



Setup

Auto Installation

The TV automatically detects and stores all available services in your area. This function also allows you to perform the channel setting for digital, satellite and analogue individually and reconfigure the settings after the initial auto installation has been completed.

- 1 Press **◀/▶** to select "Yes", and then press **OK**.
- 2 Press **▲/▼/◀/▶** to select the desired language, and then press **OK**.
 - You cannot set the Home/Store setting and the country setting in "Auto Installation" in the "Setup" menu. If you want to reconfigure those settings, automatically execute initial auto installation after executing "Reset" from the "Setup" menu.
 - The current country setting is displayed on the screen.
- 3 Press **▲/▼** to select the broadcast standard you want to search, and then press **OK**.

Digital Search

After selecting the service you want to search, either "Terrestrial" or "Cable", refer to "Digital Search" setting on pages 11–13.

NOTE

- The "Digital Search" has a "Reset" function. This function allows you to reset all setting values.

Analogue Search

The TV searches for, sorts and stores all the receivable TV stations. Refer to "Analogue Search" setting on page 13.

Satellite Search

After selecting "Satellite Search", the current DVB-S setting screen is displayed. Refer to the "Satellite Search" setting on pages 14–15.

NOTE

- After selecting "Next" in the DVB-S setting screen, you need to select your preferred satellite broadcast to start searching.
- The "Satellite Search" has a "Reset" function. This allows you to reset all setting values.

Programme Setup



Setup

Programme Setup

You can reconfigure each service setting automatically or manually.

Press **▲/▼** to select the broadcast standard you want to reconfigure, and then press **OK**.



Digital Setting

Additional Search

Use this menu to add new services automatically after auto installation has been completed.

Manual Search

Add new services within a specified frequency band.

- Enter the frequency using the **0–9** numeric buttons.
- You can perform "Manual Search" with a service number only when the five Nordic countries have been selected in the country setting.

Manual Adjust

Configure various settings for each service using the **Colour (R, G, B)** buttons.

	Service No.	Service Name	Lock	CH Skip	Old LCN
	DTV 993	SIT 3			
	DTV 994	SIT 2	✓		
	DTV 995	SIT 1		✓	
	DTV 999	HD Monosco			
	<div> R : Lock G : CH Skip B : Sort </div>				

- 1 Press **▲/▼** to select the desired service.
- 2 Press the colour button on the remote control unit corresponding with the item you want to reconfigure.
 - The **✓** mark indicates the operation is set to on. Each time the colour button is pressed, you can switch the corresponding operation on/off.

Basic adjustment

Buttons for Manual Adjust operation

Lock: Press R button.

When the service is locked, you must enter your PIN whenever you tune to the service.

CH Skip: Press G button.

Services with a ✓ mark are passed over when pressing P^/v on the Display or remote control unit.

Sort: Press B button.

The item position of services can be sorted.

- ① Press ▲/▼ to select the service whose item position you want to move, and then press OK.

DTV	994	SIT 2	✓
DTV	995	SIT 1	✓

- ② Press ▲/▼ to move it to the desired position, and then press OK.

DTV	994	SIT 1	✓
DTV	995	SIT 2	✓

- ③ Repeat steps 1 and 2 until all desired service items are sorted.

Cable Setting

Additional Search

Use this menu to add new services automatically after auto installation has been completed. Follow steps ① to ⑤ in the right column on page 12.

Manual Search

Add new services within a specified frequency band. After setting the items on the following screen, the TV starts searching.

- Refer to the table about menu items in the left column on page 13.

Frequency	[47.0]	
Symbol rate	[6900]	
QAM Modulation	[64]	
Search start		

47.0 MHz

Manual Adjust

This function is the same as in “Digital Setting”. Refer to “Manual Adjust” in “Digital Setting”.

Satellite Setting

Before selecting the type of search in “Satellite Setting”, you need to select the satellite broadcast.

SAT1 [ASTRA 1]

SAT2 [Hot Bird 13E]

SAT3 [None]

SAT4 [Turksat]

Additional Search

Use this menu to add new services automatically after auto installation has been completed. Follow steps ① to ⑥ in the right column on page 14.

Manual Search

Add new services within a specified frequency band. After setting the items on the following screen, select “Yes” from “Search start” menu.

Band	[Vert/Low]
Frequency	[9944]
Symbol rate	[27500]
Search start	

Vert/Low

Vert/High

Horiz/Low

Horiz/High

Manual Adjust

This function is the same as in “Digital Setting”. Refer to “Manual Adjust” in “Digital Setting”.

Basic adjustment

Analogue Setting

You can reconfigure the analogue TV channels settings automatically or manually.

● Additional Search

Use this menu to add new channels automatically after auto installation has been made.

- Start searching channels after selecting the colour system.

● Manual Adjust

Use this menu to set up analogue TV channels manually.

After selecting “Yes” on the screen, press **▲/▼/◄/►** to select the channel you want to set and then press **OK**.

Fine

You can adjust the frequency to the desired position.

NOTE

- Adjust while checking the background picture as a reference.
- Instead of pressing **◄/►** to adjust the frequency, you can set by directly entering the frequency number of the channel with **0-9** numeric buttons.

EXAMPLE

- 179.25 MHz: Press **1** → **7** → **9** → **2** → **5**.
- 49.25 MHz: Press **4** → **9** → **2** → **5** → **OK**.

Colour sys.

Select the optimum colour system to receive (“Auto”, “PAL”, “SECAM (L/L’)”).

Sound sys. (Broadcasting systems)

Select the optimum sound systems (Broadcasting systems) to receive (“B/G”, “D/K”, “I”, “L/L”).

Label

When a TV channel sends its Network Name, the “Auto Installation” detects the information and assigns a name to it. However, you can change channel names individually.

- 1 Press **▲/▼/◄/►** to select each character of the new name for the channel, and then press **OK**.
- 2 Repeat step 1 above until the name is fully spelt out.

NOTE

- The name can be five characters or less.
- If a channel name is less than five characters, select “END” to set the channel name.

Skip

Channels with “Skip” set to “On” are passed over when using **P▲/▼** even if selected while watching the image from the TV.

Decoder

When connecting a decoder to the AVC System, you need to select “EXT1” or “EXT2”.

NOTE

- The factory preset value is “Off”.

Lock

You can block the viewing of any channel.

NOTE

- See “Child Lock” for setting a PIN.
- When “Lock” is set to “On” for a channel, “Child lock has been activated” displays, and the image and sound of the channel are blocked.
- When pressing **↵** while “Child lock has been activated” displays, the PIN input window will display. Inputting the correct PIN unlocks the “Child Lock” temporarily until the power is turned off.

● Sort

Channel positions can be sorted freely.

- 1 Press **◄/►** to select “Yes”, and then press **OK**.
- 2 Press **▲/▼/◄/►** to select the channel you want to move, and then press **OK**.
- 3 Press **▲/▼/◄/►** to move it to the desired position, and then press **OK**.
- 4 Repeat steps 2 and 3 until all desired channels are sorted.

● Erase Programme

Channels can be erased individually.

- 1 Press **◄/►** to select “Yes”, and then press **OK**.
- 2 Press **▲/▼/◄/►** to select the channel you want to erase, and then press **OK**.
 - A message window pops up.
- 3 Press **◄/►** to select “Yes”, and then press **OK** to erase the selected channel. All the subsequent channels move up.
- 4 Repeat steps 2 and 3 until all desired channels are erased.

Basic adjustment

Password/Parental lock settings



Setup

Child Lock

Allows you to use a PIN to protect certain settings from being accidentally changed.

Change PIN

Register a four-digit password number to use the "Child Lock" function.

- 1 Enter the four-digit number as a PIN using 0–9 numeric buttons.
- 2 Enter the same four-digit number as in step 1 to confirm.
 - "The system PIN has been changed successfully" displays.

NOTE

- To view a locked channel, you must enter the PIN (See pages 35 and 36 for locking channels from viewing in DTV, SAT and ATV mode). When you select a locked channel, a PIN prompt message pops up. Press to display the PIN input window.

Cancel PIN

Allows you to reset your PIN.

NOTE

- **As a precautionary measure, make a note of your PIN on the back of this operation manual, cut it out and keep it in a safe place that children cannot reach.**

Parental rating

This function allows DTV services to be restricted. It prevents children from watching violent or sexual scenes that may be harmful.

NOTE

- "Universal viewing" and "Parental approval pref." are ratings used exclusively in France.
- Refer to page 59 for details about ratings.

Language Settings (language, subtitle, multi audio)



Setup

Language

You can select a OSD language from the "Setup" menu. Select from among 23 languages (Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian).



Digital Setup

Subtitle

Set up to two preferred subtitle languages (including subtitles for the hearing impaired) to display if subtitles are available.

Selectable items

- 1st Language ● 2nd Language
- For hearing impaired

Switching subtitle languages

Each time you press on the remote control unit, the subtitle switches.



Set "For hearing impaired" to "Yes"

Subtitles for the hearing impaired have priority over each of the subtitle language settings (Example: "1st Language", "2nd Language", etc.).

EXAMPLE

1st Language → 1st Language
(For hearing impaired)

NOTE

- Subtitles will not be displayed when the service does not contain subtitle information.



Option

Digital Audio Language

Set up to three preferred multi audio languages to display if the audio languages are available.

Switching the multi audio languages

Each time you press on the remote control unit, the audio language switches.

Useful Viewing functions

Selecting the picture size

Selecting the WSS picture size automatically



Setup

WSS

The “WSS” allows the TV to switch automatically among the different picture size.

NOTE

- Use “WIDE MODE” if an image does not switch to the appropriate picture size. When the broadcast signal contains no “WSS” information, the function will not work even if enabled.

Selecting the WSS picture size manually



Setup

4:3 Mode

The “WSS” signal has 4:3 auto-switching that allows you to select between “Normal” and “Panorama”.

Item

Normal: Normal range keeping 4:3 or 16:9 aspect ratio.

Panorama: Wide image without side bars.

WSS signal 4:3 screen

4:3 mode “Normal”



4:3 mode “Panorama”



Selecting the picture size manually

You can select the picture size. Selectable picture size varies with the type of signal received.

Item (for SD [Standard-Definition] signals)

Normal: Keeps the original aspect ratio in a full screen display.

Zoom 14:9: For 14:9 letterbox pictures. A thin side bar appears on each side, and you may also see bars on the top and bottom with some programmes.

Panorama: In this mode, the picture is stretched toward each side of the screen. The picture may appear similar to “Full” depending on broadcast signals.

Full: For 16:9 squeeze pictures.

Cinema 16:9: For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.

Cinema 14:9: For 14:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.

Item (for HD [High-Definition] signals)

Full: Displays with an Overscan image. Crops all sides of screen.

Underscan: Displays with an Underscan image only when receiving a 720p signal. Displays with the High-Definition image adjusted optimally. Noise may appear on the edge of the screen with some programmes.

Dot by Dot: Displays an image with the same number of pixels on the screen when receiving 1080i/1080p signals only.

NOTE

- Some items do not appear depending on the type of received signal.

- 1 Press **[WSS]**.
 - The “WIDE MODE” menu displays.
 - The menu lists the “WIDE MODE” options selectable for the type of video signal currently received.
- 2 Press **[WSS]** or **▲/▼** while the “WIDE MODE” menu displays on the screen.
 - As you toggle the options, each is immediately reflected on the screen. There is no need to press **OK**.

Basically, if you set “WSS” to “On” in the “Setup” menu, the optimum “WIDE MODE” is automatically chosen for every broadcast, VCR or DVD player/recorder.

NOTE

- Even if you select your desired “WIDE MODE” manually, the TV may automatically switch to the optimum “WIDE MODE” depending on the signal received when “WSS” is set to “On”.

Useful Viewing functions

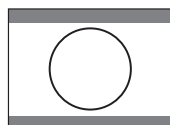
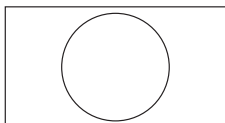
Selecting the recording picture size manually



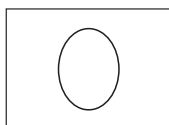
Digital Setup

REC Picture Size

You can use this menu to set the appropriate picture size for viewing a 16:9 format TV programme on a 4:3 TV.



Setting to "4:3 TV"



Setting to "16:9 TV"

NOTE

- This function must be set before recording.

Selecting the HDMI picture size automatically



Setup

HDMI Auto View

This function allows you to automatically change to the appropriate picture size when viewing an HDMI signal using the HDMI1, 2 and 3 terminals.

Other picture and audio settings

Adjusting image position



Setup

Position

For adjusting a picture's horizontal and vertical position.

Item

- H-Pos.:** Centres the image by moving it to the left or right.
V-Pos.: Centres the image by moving it up or down.

NOTE

- Adjustments are stored separately for each input source.
- Depending on the input signal type or "WIDE MODE" setting, a position setting may not be available.
- This function is not available for DTV/SAT broadcasts with MHEG signals.

Automatic volume adjustment



Option

Auto Volume

Different sound sources sometimes do not have the same volume level, such as a programme and its commercial breaks. The Automatic Volume Control (Auto Volume) reduces this problem by equalizing levels.

Outputting audio only



Option

Audio Only

When listening to music from a music programme, you can set the TV off and enjoy audio only.

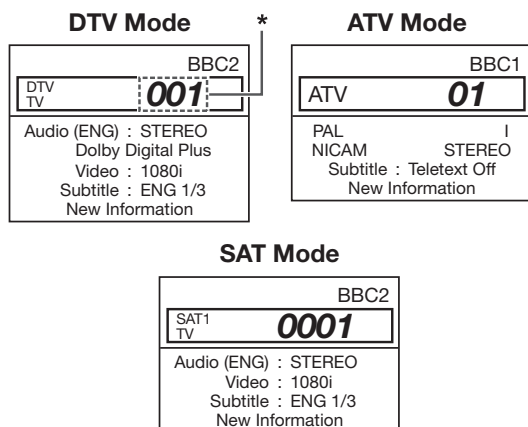
Item

- Off:** Both screen images and audio are output.
On: Audio is output without a screen image.

Display Settings

Channel display

You can display the channel information by pressing **i+** on the remote control unit.



* Four digit numbers (e.g. 0001) are displayed after selecting the five Nordic countries in the country setting.

Time display in channel information

You can display the time information included in DTV/SAT and teletext broadcasts.

NOTE

- Skip step 1 if receiving DTV/SAT broadcasts.
- 1 Select a TV channel (The time information is automatically captured).
 - 2 Press **i+**. The channel display will appear on the screen.
 - 3 Press **i+** again within the several seconds that the channel display is on the screen. Time information will be shown in the lower-right corner of the screen for several seconds.
 - 4 Even when you change the TV channel, you can display the time information with steps 2 and 3 above.

NOTE

- If acquired successfully, the time information will appear in the upper-right corner of the screen by pressing **MENU**.

Time and Title display



Option

Time Display

Time Display

This function allows you to display the clock time in the lower-right corner of the screen.

Item

- On:** Displays the clock time.
- On (half-hourly):** Displays the clock time in 30-minute increments.
- Off:** Hides the clock time.

Time Format

You can select the time format (either “24HR” or “AM/PM”) for the clock time.



Option

Game Play Time

This function allows you to display the elapsed time on the screen when “AV MODE” is set to “GAME”.

Item

- On:** Under connecting a game console to the AVC System, the elapsed time is displayed in 30-minute increments after you start playing a game.
- Off:** Hides the time.

NOTE

- This menu is not selectable if the input source is “TV” or “USB”.



Option

Programme Title Display

This function allows you to display programme information such as the title and airtime by tuning a channel.

NOTE

- This function is available only when the DTV/SAT mode is selected.

Other useful features

Setting when using external devices

Input source settings



Option

Input Select

For setting the signal type of external equipment.

Item

EXT1: Y/C, CVBS, RGB
EXT2: Y/C, CVBS, RGB
EXT8: Auto, S-VIDEO, VIDEO

NOTE

- If no (colour) image displays, try changing to another signal type.
- Check the operation manual of the external equipment for the signal type.
- When the signal type is set to "Auto", the input terminal where a cable is connected is automatically selected.



Setup

Input Label

You can label each input source with a custom description.

- 1 Press to select the desired input source.
- 2 Go to "MENU" > "Setup" > "Input Label".
- 3 Press /// to select each character of the new name for the input source, and then press **OK**.

DVD

A	B	C	D	E	F	G	H	I	J	CLEAR
K	L	M	N	O	P	Q	R	S	T	BACK
U	V	W	X	Y	Z	+	-	.		
0	1	2	3	4	5	6	7	8	9	END

- 4 Repeat until the label is fully spelt out.

NOTE

- The label can be six characters or less.
- When you want to set an input source label of less than six characters, select "END" to set the name.



NOTE

- You cannot change labels if the input source is "TV" or "USB".

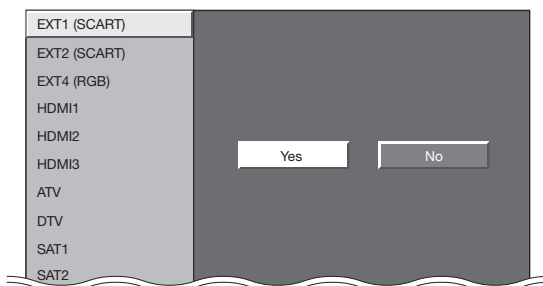
Skipping specified inputs



Setup

Input Skip

This setting allows you to skip the SCART, HDMI, RGB, ATV, DTV or SAT input on the Input Source Selection operation.



Colour system settings



Option

Colour System

You can change the colour system to one that is compatible with the image on the screen.

NOTE

- The factory preset value is "Auto".
- If "Auto" is selected, the colour system for each channel is automatically set. If an image does not display clearly, select another colour system (e.g. "PAL", "SECAM").

Additional features



Option

Setting Display Colour

You can change the background colour of the OSD (menu screen), EPG screen, channel display and programme information, etc. to the blue, gray, red or green.



Setup

Wireless power link

When turning on the main power of the Display while "Wireless power link" is set to "Linked to main power", the power of each wireless unit connected to the Display and AVC System will be turned on in conjunction with the main power of the Display.

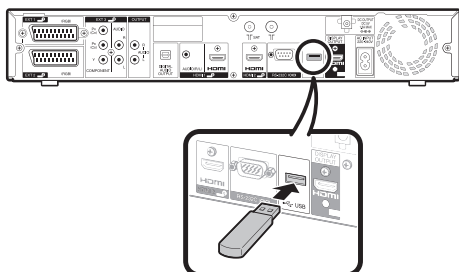
Item

- Linked to main power:** The wireless unit's power will be turned on in conjunction with the main power of the Display.
- Power always on:** The wireless unit's power will be usually turned on.

Other useful features

Connecting a USB device

Connect a USB device to the AVC System as shown below.



- Depending on the USB device, the TV may not be able to recognise the contained data.
- Use only alphanumeric characters for naming files.
- File names over 80 characters (may vary depending on character set) may not be displayed.
- Do not disconnect a USB device or memory card from the AVC System while transferring files, using the slide show function, when a screen is switching to another or before you exit "USB" from the "INPUT SOURCE" menu.
- Do not connect and disconnect a USB device from the AVC System repeatedly.

USB Photo Viewer/Music Player

In this mode, you can enjoy viewing photos and listening to music from external USB devices. Select "USB" from the "INPUT SOURCE" menu to enter this mode.

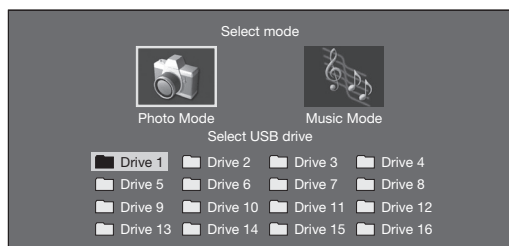
INPUT SOURCE

- TV
- EXT1
- EXT2
- EXT3
- EXT4
- HDMI1
- HDMI2
- HDMI3
- EXT8
- USB

NOTE

- You cannot enter this mode when there is no USB device connected to the AVC System.
- This mode is not available during DTV/SAT timer recording.
- "WIDE MODE" is fixed during this mode.
- "USER (USB)" is the default value for the "AV MODE" setting. Each time you press **AV MODE**, the mode changes between "USER (USB)", "DYNAMIC (Fixed)", "DYNAMIC" and "STANDARD".

Selecting modes and devices



- 1 Press **◀/▶** to select between "Photo Mode" and "Music Mode", and then press **OK**.
- 2 Press **▲/▼/◀/▶** to select the drive where you want to find your files, and then press **OK**.

NOTE

- You do not need to select the drive in step 2 when there is only one drive in the connected USB device.
- 16 is the maximum number of drives that can be displayed.

Photo Mode

Viewing thumbnails



Buttons for thumbnail operations

Buttons	Description
OK	When selecting the folder icon with the ↵ mark: Go back to the parent directory. When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Display the photo in full screen.
▲/▼/◀/▶ (Cursor)	Select a desired item.
↵	Return to the top menu.
R button	Go back to the previous page.
G button	Go to the next page.
Y button	Select BGM for the slide show.
B button	Start the slide show.

NOTE

- When there are invalid photo files, the **X** mark will be displayed for the file.
- You can see the file name, shooting date, file size and pixel size of the selected photo in the lower-left corner of the screen (shooting date is only available in the EXIF file format).

Viewing photos in full screen

Buttons for full screen display operation

Buttons	Description
◀/▶ (Cursor)	Go to the previous/next photo in the same directory.
↵	Return to the thumbnail selection screen.
R button	Rotate the photo by 90 degrees to the left.
G button	Rotate the photo by 90 degrees to the right.
B button	Reveal/hide the Guide Display.

NOTE

- Rotating photos only applies to the temporarily selected item and this setting is not saved.



Other useful features

Slide show

Selecting the BGM

File name	Time
Demo/Demo1	
SONGS	
CLASSIC	
SONG_01.MP3	3:05
SONG_02.MP3	3:15
SONG_03.MP3	3:02
SONG_04.MP3	6:05
SONG_05.MP3	4:52
SONG_06.MP3	0:00
SONG_07.MP3	3:13
SONG_08.MP3	3:23
SONG_09.MP3	3:33
Playing:	
SONG_02.MP3	1:00 / 3:15
Slide Show BGM:	
SONG_03.MP3	

Buttons for slide show BGM select operation


Buttons	Description
OK	When selecting the folder icon with the  mark: Go back to the parent directory. When selecting a folder icon: Enter this directory. When selecting a music file: Play music.
▲/▼ (Cursor)	Select a desired item.
◀ (Cursor)	Page up.
▶ (Cursor)	Page down.
	Return to the thumbnail selection screen.
R button	Stop music.
G button	Play/Pause music.
Y button	Set the selected music to the slide show BGM.
B button	Reset the slide show BGM.

NOTE


- Only one song can be set to the slide show BGM.
- Slide show BGM will be reset in the cases below.
 - Go back to the top menu.
 - Change the "INPUT SOURCE".
- When there are invalid music files, the **X** mark will be displayed for the file.
- The displayed play time may differ slightly from the actual play time depending on the files.

Slide show

Buttons for slide show operation

Buttons	Description
	Return to the thumbnail selection screen.
B button	Reveal/hide the Guide Display.



NOTE

- The selected BGM is played repeatedly.
- The slide show continues until you press .
- The slide show speed is approximately 10 seconds per photo.

Music Mode

File name	Time
Demo/Demo1	
ROOT	
CLASSIC	
SONG_01.MP3	3:05
SONG_02.MP3	3:15
SONG_03.MP3	3:02
SONG_04.MP3	6:05
SONG_05.MP3	4:52
SONG_06.MP3	0:00
SONG_07.MP3	3:13
SONG_08.MP3	3:23
SONG_09.MP3	3:33
Playing:	
SONG_02.MP3	1:00 / 3:15

Buttons for Music Mode

Buttons	Description
OK	When selecting the folder icon with the  mark: Go back to the parent directory. When selecting a folder icon: Enter this directory. When selecting a music file: Play music.
▲/▼ (Cursor)	Select the desired item.
◀ (Cursor)	Page up.
▶ (Cursor)	Page down.
	Return to the top menu.
R button	Stop music.
G button	Play/Pause music.
B button	Turn off the screen image for audio only output.

NOTE

- When there are invalid music files, the **X** mark will be displayed for the file.
- The displayed play time may differ slightly from the actual play time depending on the files.

USB device compatibility

USB device	USB Memory, USB card reader (Mass Storage class)
File system	FAT/FAT32
Photo file format	JPEG (.jpg) (DCF2.0 compliant)
Music file format	MP3 (.mp3) Bitrate: 32k, 40k, 48k, 56k, 64k, 80k, 96k, 112k, 128k, 160k, 192k, 224k, 256k, 320kbps Sampling frequency: 32k, 44.1k, 48kHz

NOTE

- Progressive format jpeg files are not supported.
- Music files in USB 1.1 devices may not be played properly.
- Operation using USB hubs is not guaranteed.

Gallery Mode

You can display pictures saved in USB devices for your wallpaper picture by pressing **GALLERY** on the remote control unit.

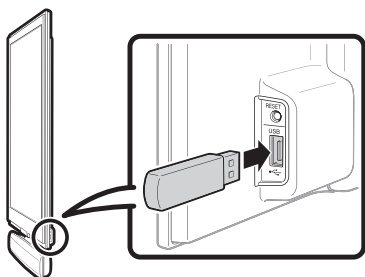
NOTE

- Compatible files include those taken by digital cameras with the DCF 2.0 specification or mobile phones' built-in cameras.
- Music cannot be played during this mode.
- SD card readers or USB hubs cannot be used.
- This mode continues when timer recording starts, but ends when timer viewing starts.
- During this mode, the power on the AVC System turns off while the main power on the Display is on (but standby/on indicator turns to red).
- Gallery Mode stops by pressing **END** on the remote control unit, and the TV returns to the normal viewing mode.

Basic operation for Gallery Mode

Displaying pictures saved in a USB device

Connect a USB device to the Display as shown below.



- 1 Press **GALLERY** on the remote control unit after connecting a USB device to the Display.
- 2 A slide show will then start.

NOTE

- Make sure that a USB device is connected before pressing **GALLERY**.
- The playback order is based on the save dates and cannot be changed.
- The device contains up to 100 files. If there are more than 100, some may not be displayed.
- The picture files should be in the top directory, and the files in any subordinate folders cannot be displayed.
- Refer to the right column **Gallery Mode setting** to change the viewing options.
- If there are incompatible files, an error displays for the file until the next compatible picture is displayed.
- Refer to pages 42–43 for details on connecting USB devices and device/file compatibility.
- Slide show will stop if you disconnect the USB device.
- Press **END** and go back to the normal viewing mode, and then press **GALLERY** again when you switch USB devices.

Gallery Mode setting

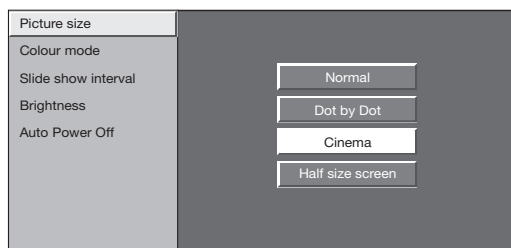


Option

Gallery Setup

You can adjust the display size, slide show time length, brightness and sleep timer.

- 1 Press **MENU** and the “MENU” screen displays.
- 2 Press **◀/▶** to select “Option”.
- 3 Press **▲/▼** to select “Gallery Setup”, and then press **OK**.
- 4 Press **▲/▼** to select the desired items, and then press **OK**.



- 5 Repeat step 4 until the setting is complete.

NOTE

- To start Gallery Mode during this setting, press **GALLERY** on the remote control unit.

Other useful features

Picture size

Item

- Normal:** Keeps the original aspect ratio in a full screen display.
- Dot by Dot:** Displays images with a 1:1 pixel ratio on the screen without any scaling.
- Cinema:** Keeps the original aspect ratio in a full screen display without showing any black bars.
- Half size screen:** Images are displayed in the centre of a screen at half the size of a full screen image.

NOTE

- The factory preset value is “Cinema”.
- When set to “Half size screen”, the background colour is black and this cannot be changed.

Colour mode

You can select your preferred colour mode.

Item

- Mode1:** Display brighter colour.
- Mode2:** Display accurate colour in images.

Slide show interval

You can set the slide show time length for each picture to “15 sec.”, “30 sec.” or “30 min.”.

NOTE

- The factory preset value is “15 sec.”.
- The sequence will repeat from the first picture after all the pictures have displayed.

Brightness

You can set the brightness of the screen in Gallery Mode.

Item

- Mode1:** Lowest brightness with maximum power saving.
- Mode2:** A brighter mode suitable for displaying pictures in most situations.
- Mode3:** Suitable for displaying in brightly lit areas.
- Auto:** Adjusts the brightness automatically depending on the surrounding brightness.

NOTE

- The factory preset value is “Mode1”.

Auto Power Off

You can set the time length until the TV automatically enters sleep mode to “30 min.”, “1 h”, “3 h” or “24 h”.

NOTE

- The factory preset value is “1 h”.

Troubleshooting for Gallery Mode

Follow the possible solutions listed below when you see the error message.



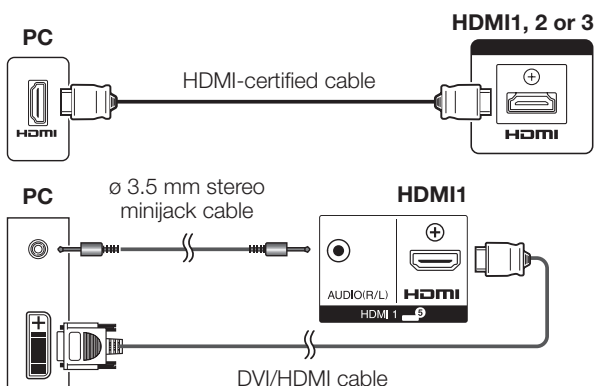
(Example of an error display)

Possible Solution
<ul style="list-style-type: none">Images that do not conform to the DCF 2.0 specification may not be displayed. If the images have been changed or edited on a PC, the data may change to a format that is incompatible with the TV.
<ul style="list-style-type: none">The file size may be over 5MB. The file size can be reduced by selecting a smaller pixel size when taking pictures with a digital camera.The resizing function of digital cameras can also reduce the file size.
<ul style="list-style-type: none">The pixel size may exceed 4,096 × 3,072. A smaller pixel size can be selected when taking pictures with a digital camera.The resizing function of digital cameras can also reduce the pixel size.
<ul style="list-style-type: none">There may be incompatible or corrupt data. If only this error message is displayed, the top directory in the USB device may not contain any compatible JPEG files.

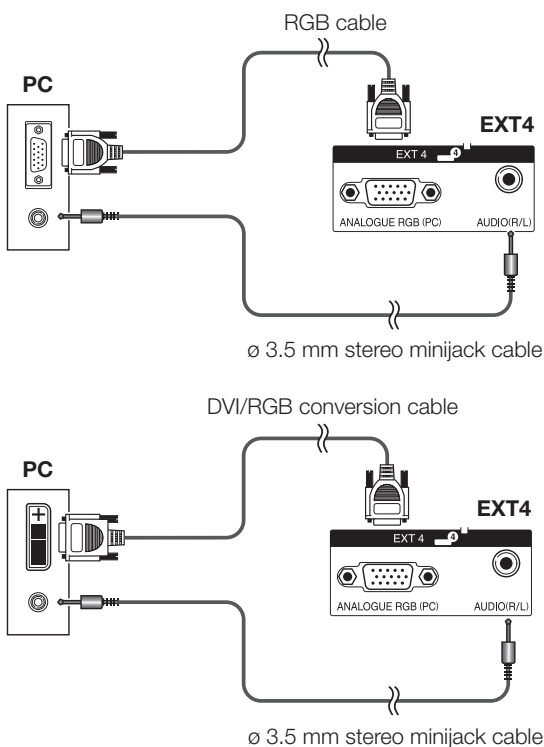
Connecting a PC

Connecting a PC

HDMI Connection



Analogue Connection



NOTE

- The PC input terminals are DDC1/2B-compatible.
- Refer to page 49 for a list of PC signals compatible with the TV.
- A Macintosh adaptor may be required for use with some Macintosh computers.
- When connecting to a PC, the input signal type is automatically detected except 1,024 × 768 and 1,360 × 768 signals.

Displaying a PC image on the screen

Selecting the picture size

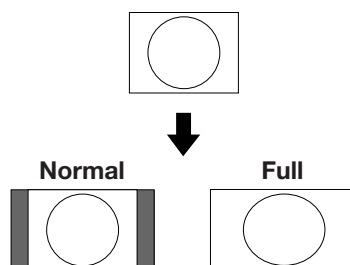
You can select the picture size.

- 1 Press **[WIDE]**.
 - The "WIDE MODE" menu displays.
- 2 Press **[WIDE]** or **[▲/▼]** to select a desired item on the menu.

NOTE

- Connect the PC before making adjustments.
- Selectable picture size may vary with input signal type.

EXAMPLE



Item

Full: An image fully fills the screen.

Cinema: For letterbox pictures. Bars may appear on the top and bottom with some programmes.

Normal: Keeps the original aspect ratio in a full screen display.

Dot by Dot: Displays an image with the same number of pixels on the screen.

NOTE

- Refer to page 38 for AV signals (See below).
HDMI: 480i/480p/576i/576p/720p/1080i/1080p
ANALOGUE RGB: 576p/720p (50Hz)/1080i
- The ANALOGUE RGB terminal (PC) (EXT4) is not compatible with 480i/576i/1080p signals.

Adjusting the PC image automatically

This function enables the screen to be automatically adjusted to its best possible condition when the analogue terminals of the AVC System and PC are connected with a commercially available DVI/RGB conversion cable, etc.



Setup

Auto Sync.



NOTE

- When "Auto Sync." is successful, "Auto Sync completed successfully" displays. If not, "Auto Sync." failed.
- "Auto Sync." may fail even if "Auto Sync completed successfully" displays.
- "Auto Sync." may fail if the PC image has low resolution, has unclear (black) edges, or is moved while executing "Auto Sync."
- Be sure to connect the PC to the AVC System and switch it on before starting "Auto Sync."
- "Auto Sync." can be executed only when inputting analogue signals through the EXT4 terminal.

Adjusting the PC image manually

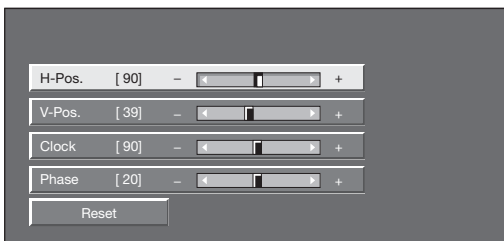
Ordinarily you can easily adjust the picture as necessary to change image position using "Auto Sync.". In some cases, however, manual adjustment is needed to optimise the image.



Setup

Fine Sync.

- 1 Press **▲/▼** to select the specific adjustment item.
- 2 Press **◀/▶** to adjust the item to the desired position.



Item

H-Pos.: Centres the image by moving it to the left or right.

V-Pos.: Centres the image by moving it up or down.

Clock: Adjusts when the image flickers with vertical stripes.

Phase: Adjusts when characters have low contrast or when the image flickers.

NOTE

- For resetting all adjustment items to the factory preset values, press **▲/▼** to select "Reset", and then press **OK**.
- "Clock" and "Phase" in the "Fine Sync." menu can be adjusted only when inputting analogue signals through the EXT4 terminal.

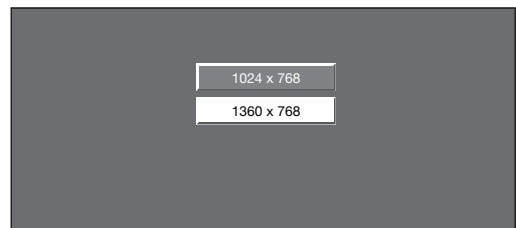
Selecting input resolution

- Some input signals may have to be registered manually to display properly.
- The pairs of input signals (resolutions) in the list below are not distinguishable when received. In such cases, you have to set the correct signal manually. After setting once, it will display when the same signal (resolution) is input again.



Setup

Input Signal



(Example)

NOTE

- You can only select the "Input Signal" on the "Setup" menu when receiving one of the two input signals listed above.

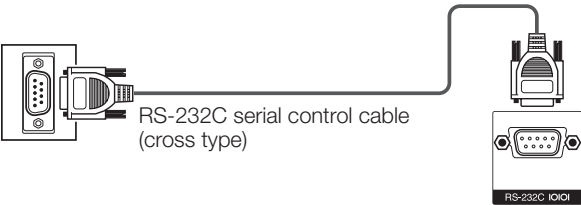
RS-232C port specifications

PC Control of the TV

- When a programme is set, the TV can be controlled from the PC using the RS-232C terminal. The input signal (PC/video) can be selected, the volume can be adjusted and various other adjustments and settings can be made, enabling automatic programmed playing.
- Use an RS-232C serial control cable (cross type) (commercially available) for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using PCs.



Communication conditions

Set the RS-232C communications settings on the PC to match the TV's communications conditions. The TV's communications settings are as follows:

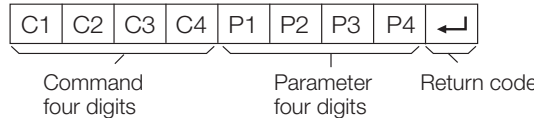
Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure

Send the control commands from the PC via the RS-232C connector.
The TV operates according to the received command and sends a response message to the PC.
Do not send multiple commands at the same time. Wait until the PC receives the OK response before sending the next command.
Make sure to send "A" with the carriage return and confirm that "ERR" returns before operating.

Command format

Eight ASCII codes + CR



Command four digits: Command. The text of four characters.
Parameter four digits: Parameter 0–9, blank, ?, minus

Parameter

Input the parameter values, aligning left, and fill with blank(s) for the remainder (Be sure that four values are input for the parameter).
When the input parameter is not within an adjustable range, "ERR" returns (Refer to "Response code format").

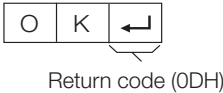
0			
0	0	0	9
-	3	0	
1	0	0	
0	0	5	5

When "?" is input for some commands, the present setting value responds.

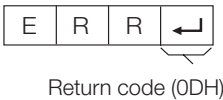
?			
?	?	?	?

Response code format

Normal response



Problem response (communication error or incorrect command)



After sending the return code (0DH), make sure to send the line feed (0AH) as well.

PC compatibility chart

Resolution		Horizontal Frequency	Vertical Frequency	Analogue (D-Sub)	Digital (HDMI)	VESA Standard
VGA	640 × 480	31.5 kHz	60 Hz	✓	✓	✓
SVGA	800 × 600	37.9 kHz	60 Hz	✓	✓	✓
XGA	1,024 × 768	48.4 kHz	60 Hz	✓	✓	✓
WXGA	1,360 × 768	47.7 kHz	60 Hz	✓	✓	✓
SXGA	1,280 × 1,024	64.0 kHz	60 Hz	✓	✓	✓
SXGA+	1,400 × 1,050	65.3 kHz	60 Hz		✓	✓

VGA, SVGA, XGA, WXGA, SXGA and SXGA+ are registered trademarks of International Business Machines Corporation.

NOTE

- This TV has only limited PC compatibility, correct operation can only be guaranteed if the video card conforms exactly to the VESA 60 Hz standard. Any variations from this standard will result in picture distortions.

RS-232C command list

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POWER SETTING	P O W R 0 _ _ _		POWER OFF (STAND BY)
INPUT SELECTION A	I T G D _ _ _ _		INPUT SWITCHING (TOGGLE)
	I T V D _ _ _ _		TV (CHANNEL FIXED)
	I D T V _ _ _ _		DTV (CHANNEL FIXED)
	I A V D * _ _ _		EXT1-4, 8 (1-4, 8), HDMI1-3 (5-7)
	I A V D * _ _ _		EXT1-4, 8 (1-4, 8), HDMI1-3 (5-7)
CHANNEL	D C C H * * _ _		TV DIRECT CHANNEL (1-99)
	C H U P _ _ _ _		CHANNEL UP
	C H D W _ _ _ _		CHANNEL DOWN
	D T V D * * * _		THREE DIGIT DTV DIRECT CHANNEL (1-999) (Non-Nordic countries)
	D T V D * * * *		FOUR DIGIT DTV DIRECT CHANNEL (1-9999) (Nordic countries only)
	I D E G _ _ _ _		DIGITAL NETWORK CHANGE
	D S C 1 * * * *		DVB-S 1 DIRECT CHANNEL (1-9999)
	D S C 2 * * * *		DVB-S 2 DIRECT CHANNEL (1-9999)
	D S C 3 * * * *		DVB-S 3 DIRECT CHANNEL (1-9999)
	D S C 4 * * * *		DVB-S 4 DIRECT CHANNEL (1-9999)
	D T U P _ _ _ _		DTV CHANNEL UP
	D T D W _ _ _ _		DTV CHANNEL DOWN
	D T D W _ _ _ _		DTV CHANNEL DOWN
INPUT SELECTION B	I N P 1 0 _ _ _		EXT1 (Y/C)
	I N P 1 1 _ _ _		EXT1 (CVBS)
	I N P 1 2 _ _ _		EXT1 (RGB)
	I N P 2 0 _ _ _		EXT2 (Y/C)
	I N P 2 1 _ _ _		EXT2 (CVBS)
	I N P 2 2 _ _ _		EXT2 (RGB)
	I N P 8 0 _ _ _		EXT8 (AUTO)
	I N P 8 1 _ _ _		EXT8 (Y/C)
	I N P 8 2 _ _ _		EXT8 (CVBS)
	I N P 8 2 _ _ _		EXT8 (CVBS)
AV MODE SELECTION	A V M D 0 _ _ _		TOGGLE
	A V M D 1 _ _ _		STANDARD
	A V M D 2 _ _ _		MOVIE
	A V M D 3 _ _ _		GAME
	A V M D 4 _ _ _		USER
	A V M D 5 _ _ _		DYNAMIC (Fixed)
	A V M D 6 _ _ _		DYNAMIC
	A V M D 7 _ _ _		PC
	A V M D 8 _ _ _		x.v.Colour
	A V M D 1 0 _ _		MOVIE (LIVING ROOM)
	A V M D 1 0 _ _		MOVIE (LIVING ROOM)
	A V M D 1 0 _ _		MOVIE (LIVING ROOM)
VOLUME	V O L M * _ _ _		VOLUME (0-60)

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POSITION	H P O S * * * _		H-POSITION (AV/PC)
	V P O S * * * _		V-POSITION (AV/PC)
	C L C K * * * _		CLOCK (0-180)
	P H S E * * * _		PHASE (0-40)
	P H S E * * * _		PHASE (0-40)
WIDE MODE	W I D E 0 _ _ _		TOGGLE (AV)
	W I D E 1 _ _ _		NORMAL (AV)
	W I D E 2 _ _ _		ZOOM 14:9 (AV)
	W I D E 3 _ _ _		PANORAMA (AV)
	W I D E 4 _ _ _		FULL (AV)
	W I D E 5 _ _ _		CINEMA 16:9 (AV)
	W I D E 6 _ _ _		CINEMA 14:9 (AV)
	W I D E 7 _ _ _		NORMAL (PC)
	W I D E 8 _ _ _		CINEMA (PC)
	W I D E 9 _ _ _		FULL (PC)
	W I D E 1 0 _ _		DOT BY DOT (AV/PC)
	W I D E 1 1 _ _		UNDERSCAN (AV)
	W I D E 1 1 _ _		UNDERSCAN (AV)
MUTE	M U T E 0 _ _ _		TOGGLE
	M U T E 1 _ _ _		MUTE ON
	M U T E 2 _ _ _		MUTE OFF
SURROUND	A C S U 0 _ _ _		SURROUND TOGGLE
	A C S U 1 _ _ _		SURROUND ON
	A C S U 2 _ _ _		SURROUND OFF
AUDIO CHANGE	A C H A _ _ _ _		TOGGLE
SLEEP TIMER	O F T M 0 _ _ _		OFF
	O F T M 1 _ _ _		SLEEP TIMER 30 MIN
	O F T M 2 _ _ _		SLEEP TIMER 1 HOUR
	O F T M 3 _ _ _		SLEEP TIMER 1 HOUR 30 MIN
	O F T M 4 _ _ _		SLEEP TIMER 2 HOUR
	O F T M 5 _ _ _		SLEEP TIMER 2 HOUR 30 MIN
	O F T M 5 _ _ _		SLEEP TIMER 2 HOUR 30 MIN
TEXT	T E X T 0 _ _ _		TEXT OFF
	T E X T 1 _ _ _		TEXT ON (TOGGLE)
	D C P G * * * _		DIRECT PAGE JUMP (100-899)

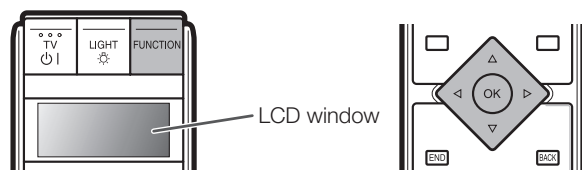
Appendix

Using the universal remote control

You can operate connected AV products (DVD player/recorder, SetTopBox, VCR and others) by setting up your remote control as a universal remote control unit.

NOTE

- Some manufacturer code indicated in the operational manual and the universal remote control device do not correspond. When recording a signal other than the signal being watched, some signals cannot be recorded depending on the signal being viewed.



Presetting the manufacturer code

- Press **FUNCTION** repeatedly until you reach the device you wish to control. (TV, DVD1, DVD2, STB1, STB2 and VCR)
 - Press this button briefly (for more than 0.2 seconds) to move between the items.
- Press and hold both **FUNCTION** and **OK** for 3 seconds.
 - In the LCD window, the 3-digit manufacturer code input screen blinks.
- Enter the 3-digit manufacturer code using **▲/▼/◀/▶**, and then press **OK**.
 - The TV returns to the normal TV mode.

LCD Window Display	Category	Manufacturer
DVD1/DVD2	DVD player	Magnum - Zenith
	DVD recorder	JVC - Yukai
	DVD/LD	Pioneer
	DVD part of DVD/VCR	Bush - Toshiba
	DVD part of DVD/DVR	Panasonic - Toshiba
	HTIB*	Aiwa - Sony
	DVD part of SAT/DVD	Humax
VCR	DVD part of TV/DVD	Bush - Toshiba
	VCR part of DVD/VCR	Bush - Toshiba
	VCR part of TV/VCR	Aiwa - Toshiba
STB1/STB2**	VCR	Adelsound - Yoko
	SAT part of SAT/DVD	Humax
	SAT part of SAT-DVR	BSSkyB - Zehnder
	Satellite	AB Sat - Woorisat
	Satellite receiver	Hauppauge
	Satellite receiver/recorder	Humax - Kathrein
	Cable box	ABC - Wittenberg

* Home Theatre in a Box System

** SAT and CBL are integrated

Manufacturer code

DVD	Manufacturer Code	DVD	Manufacturer Code
Sharp	029 128 143 177 191	Marantz	049 098 200 201
Magnum	101	Matsui	030
Acoustic Solutions	001	MBO	001 145
Aiwa	004 039 131 231	Mediencom	150
Akai	034 095	Medion	096 101 112 128 158
Akura	108	Metz	094
Alba	001 014 017 018 040	MICO	104
Apex	139	Micromaxx	096 101 128
Awa	001	Micromedia	002
Avion	001	Micromega	171
Best Buy	107	Microstar	096 101 128
Boston	152	Mirror	158
Brainwave	034	Mitsubishi	125 166
Brandt	002 012 030	Mizuda	106 107
Britannia	150	Moryka	103
Bush	001 019 032 042 045 087 092 102 106 149 158 209 223 224 225 226	Mustek	001 100 198
Cambridge Audio	104 163	Mx Onda	104
CAT	153 154	NAD	143
Celestial	161	Naiko	109
Centrex	109	Nakamichi	147
Centrum	154	Neufunk	103
CGV	104	NU-TEC	102
CineVision	157	Omni	150
Classic	001 100	Onkyo	002 097 165
Clatronic	106	Optim	151
Coby	001	Optimus	168
Conia	102	Orava	106
Crypto	159	Orion	087
C-Tech	105	Ortron	096
CyberHome	003 022 025 036	P&B	106
Daewoo	023 038 078 113 114 115	Pacific	105
Dalton	162	Palsonic	149
Dansai	034 151 227	Panasonic	013 079 093 123 164 194 195 214 232
Daytek	005 020	Philips	233 002 006 027 035 043 044 049 074 098 121 127 165 171 181 202
DEC	106	Philips Magnavox	121
Denon	123 138 164 188 199 210	Pioneer	007 008 010 046 094 168 174 178 183 207 220
Denver	106 108 133	Proline	109
Denzel	103	Provision	106
Desay	155	Ralte	103
Diamond	104 105	RCA	135
Digitel	160	REC	149 150
DK Digital	032 176	RedStar	108
Dmtech	111	Reoc	105
Dual	001 103	Revolv	156
D-Vision	034	Roadstar	001 014 106 149
DVX	105	Rowa	102 109
Easy Home	107	Rowsonic	154
Eclipse	104	Saba	012 030
Elita	034 124 134	Sabaki	105
Emerson	129	Sampo	136
Enzer	103	Samsung	011 076 077 126 175 186 213 217
Euroline	034	Sansui	104 105
Finlux	104	Sanyo	028 033 089 179 189 218
Fisher	132	ScanMagic	001
Global Solutions	105	Schneider	096 110 111 112
Global Sphere	105	Scientific Labs	105
Go Video	126	Scott	017 162
GoldStar	015	SEG	014 026 103 105 110 141
Goodmans	001 014 018 045 106 109 158 203 228	Sherwood	140
Graetz	103	Shinco	135
Grundig	018 038 099 109 127	Sigmatel	107
H&B	106 156	Silva	108
Haaz	104 105	Singer	104 105
Harmon/Kardon	144	Skymaster	001 026 100 105 134
HE	001	Skymaster	108
HIMAX	107	SM Electronic	001 105
Hitachi	011 047 088 101 103 107 126 190 196 206 215	Sony	004 009 021 031 041 075 122 169 180 204 205 221 222
Home Electronics	001	Soundmaster	105
Humax	048	Soundmax	105
Innovation	096 101 128	Standard	105
JDB	001	Star Cluster	105
Jeutech	152	Starmedia	106
JVC	002 016 080 081 082 083 084 085 120 173 182 184 212	Supervision	001 105
Kenwood	037 123 142 170 208 211 219 229	Synn	105
Kingavon	106	TCM	096 101 128
Kiss	103 156	Teac	094 102 105 192
Koda	106	Tec	108
KXD	107	Technics	101 164 193 232
Lawson	105	Technika	034
Lecson	151	Technosonic	034
Lenco	106	Telefunken	154
LG	015 024 090 129 185 216	Tevion	096 101 105 128 162
Life	096 128	Thomson	012 091 116 117 118 119 148 167 172 197
Lifetec	096 101 128	Tokai	103 108
Limit	105	Toshiba	002 086 087 121 165 187
Loewe	044 127	TruVision	107
LogicLab	105		
Luxor	109		
Magnavox	002 106 165		

Appendix

DVD	Manufacturer Code
United	001
Voxson	001
Vtrek	159
Wharfedale	104 105 130
Writel	152
Xbox	167
Xlogic	105
XMS	149
Yakumo	109
Yamada	109
Yamaha	006 013 123 137 164 230
Yamakawa	103 146
Yukai	001
Zenith	002 129 165

DVD Recorder	Manufacturer Code
JVC	057 058 059 060
LG	065
Panasonic	052 062
Philips	050 051 053 061 063 064
Sony	054 055 056
Toshiba	067 068 069
Yukai	066

DVD/LD	Manufacturer Code
Pioneer	007

DVD/VCR Combo	Manufacturer Code
Sharp	029 (DVD)/028 032 (VCR)
Bush	087 (DVD)/036 (VCR)
Daewoo	078 (DVD)/029 (VCR)
Hitachi	088 (DVD)/025 (VCR)
JVC	080 081 082 083 084 085 (DVD)/007 025 033 034 (VCR)
LG	015 (DVD)/014 030 (VCR)
Orion	087 (DVD)/038 (VCR)
Panasonic	079 (DVD)/031 037 (VCR)
Philips	074 (DVD)/026 (VCR)
Samsung	076 077 (DVD)/210 (VCR)
Sanyo	089 (DVD)/039 (VCR)
Sony	075 (DVD)/027 (VCR)
Toshiba	086 (DVD)/035 (VCR)

DVD/DVR	Manufacturer Code
Panasonic	052 062
Pioneer	070 071 072
Samsung	073
Toshiba	067

HTIB	Manufacturer Code
Alwa	231
DK Digital	176
Hitachi	215
JVC	184
Kenwood	219
LG	216
Mustek	198
Panasonic	194 195 214
Pioneer	220
Samsung	213
Sanyo	189 218
Sony	205 221 222

SAT/DVD	Manufacturer Code
Humax	048

TV/DVD Combo	Manufacturer Code
Bush	092
LG	090
Panasonic	093
Thomson	091
Toshiba	087

TV VCR combo	Manufacturer Code
Alwa	042
Bush	042
Daewoo	021 040
GoldStar	209
Goodmans	047
Grundig	041
Orion	045
Philips	041 046
Roadstar	042 045
Samsung	043
Sony	044
Tatung	042
Toshiba	042 043 045 048

VCR	Manufacturer Code
Sharp	001 015 028 032 063 064 073 089 149 150 151 153 165
Adelsound	056

VCR	Manufacturer Code
Adyson	055
Alwa	014 026 042 045 049 050 051 059 060 102 111 149 150 153
Akai	045 050 058 060 128 149 150 153 158 193
Akiba	055
Akura	050 055 060
Alba	021 026 045 051 052 055 058 061 128 129 130
Allorgan	043 126
Ambassador	052 058
Amstrad	026 049 055 061 149 162 189
Anitech	055
Ansonic	056
ASA	053 054 059 149 150 153
Asuka	026 049 053 054 055 059 149
ASWO	179
Audio sonic	061
AudioTon	058
Baird	021 026 049 050 060 061 123 154
Basic Line	021 051 052 055 058 061
Bauer	160 187
Baur	054 070
Beaumarck	157
Bestar	021 052 058 061
Black Panther Line	021 061
Blaupunkt	006 008 054 057 069 070 071 083 119 124 125 149 150 151 153 171 179

Blue Sky	051 059
Bondstec	052 055 058
Brandt	009 060 132
Brandt	154
Electronique	
Brinkmann	051
Broksonic	155 157
BSR	188
Bush	021 026 036 042 045 051 055 061 075 127 128 129 130
Carrefour	121
Casio	026
Cathay	061
Catron	052 058
CGE	026 049 050 060 149

Climine	051 055
Clatronic	052 055 058
Combitech	045
Condor	021 052 058 061
Continental Edison	154
Crown	021 052 055 058 061
Curtis Mathes	157
Cybermaxx	072
Daewoo	018 021 029 040 045 052 058 061 072 121
Dansai	055 061
Dantax	051
Daytron	021 061
De Graaf	054
Decca	007 026 049 050 054 060
DeGraaf	063 120 123
Denko	055
Denon	098
Diamant	059 209
Dual	026 050 054 060 061 154
Dumont	026 049 054 123

Ebe	061
Elcatech	055
Elin	067 126
Elsay	055
Elta	055 061
Emerson	055 121 155
ESC	021 058 061 126
Etzuko	055
Europhon	058
Ferguson	007 009 026 050 060 071 132 201 202 204
Fidelity	026 049 055
Finlandia	026 054 063 120 123
Finlux	026 049 050 054 080 120 123 149 150 153 197 207
Firstline	018 051 053 055 058 080 114 120 121 127
Fisher	058 122 123 149 150 153 159

Flint	071
Formont/Phoenix	054
Frontech	052 058
Fujitsu	026 049
Funai	026 049 149 150 153 188
Galaxy	026 049
GBC	052 055 058
GE	157
GEC	054
Geloso	055
General	052 058
General Technic	006 043 051

VCR	Manufacturer Code
Genexxa	123
Go Video	157
GoldHand	055
GoldStar	026 049 053 059 149 150 153 155 157 209
Goodmans	021 026 047 049 051 052 053 055 058 059 061 067 073 126 127
Graetz	050 060 123 126
Granada	026 054 057 059 063 071 120 123 126
Grandin	021 026 049 052 053 055 058 059 061 072
Grundig	009 041 054 055 057 069 070 071 074 075 076 090 125 149 150 153 173 179 181 182 187
Hanseatic	053 054 059 061
Hantor	058
Harwood	055
HCM	055 075
Hinari	045 051 055 056 060 061 075 127

Hisawa	045 051 166
Hitachi	005 016 019 026 049 050 054 056 060 098 115 120 123 126 149 150 153 175 185
Hypson	051 055 061
Impego	052 058
Imperial	026 049 126 149
Ingersol	056 126
Inno Hit	021 052 054 055 058 061 067 126
Innovation	006 043 051
Interbuy	053 055 059
Interfunk	054 123
Intervision	026 049 051 059 061 209
Irradio	053 055 059
ITT	050 060 077 123 126
ITT Nokia	154
ITV	021 053 058 059 061
JBL	147
J.C. Penney	098 155 157
JVC	007 025 033 034 050 060 077 078 079 098 105 106 140 149 150 153 154 161 200 204

Kaisui	055
Karcher	054
Kendo	018 021 051 052 055 059 128
Kenwood	050 060
Kimari	122
Kneissel	045 051
Korpel	055
Kuba	122
Kyoto	055
Lenco	021
Leyco	055
LG	010 014 024 026 030 049 053 059 112
Lifetec	006 043 051 072
Loewe	006 137
Loewe Opta	053 054 056 057 059 071 124 131 151 169 179 209
Logik	055 056 067 126
Lumatron	021 061 072
Luxor	055 063 073 080 114 122 123 149 150 153 180 195

M Electronic	026 049 059
Magrin	157
Manesth	018 055 121
Marantz	054 057 071 073 179
Mark	061
Matsui	026 045 051 053 056 059 126 133 162 164
Mediator	054
Medion	006 043 051 072
M-Electronic	026 059 209
Memorex	026 049 053 059 063 098 122 123 155

Memphis	055
Metz	006 008 057 070 071 124 125 131 179 181 187
MGN	157
Micromaxx	006 043 051 072
Microstar	006 043 051 072
Migros	026 049
Minerva	070 071 125 181 187
Minolta	098
Mitsubishi	007 049 054 080 107 114 149 150 153 155 170 199
Multitech	026 049 052 054 055 058 123
Murphy	026 049
National	006 069 124
NEC	007 050 060 154 155 177
Neckermann	050 054 057 060 154 179
NEI	054
Nesco	026 045 055

VCR	Manufacturer Code
Nikkai	052 055 058 061
Nokia	050 060 061 063 067 120 123 126 128 180 195
Nordmende	007 009 050 060 077 124 134 149 150 153 154 161 201 204 205
Oceanic	026 049 050 060 063 123
Okano	051 055 061 128
Optimus	155 156
Orion	038 045 051 056 129 130 155 163 166 188 191 192
Orson	026 049
Osaki	028 049 053 055 059
Osume	127
Otake	129 130
Otto Versand	054 187
Palladium	050 053 055 056 057 059 060 071 126 128
Panasonic	002 006 008 023 031 037 069 086 091 101 124 131 137 149 150 151 153 155 167 169 171 174 190 198

Pathe Cinema	056 114
Pathe Marconi	050 060 154
Pentast	098
Perico	026 049
Philco	055 098
Philips	005 011 017 019 020 026 041 046 054 057 062 065 071 076 077 087 090 092 093 095 100 104 108 110 136 149 150 153 179

Phonola	054
Pioneer	007 054 120 149 150 153 156 203
Portland	021 052 058 061
Prinz	026 049
Proflex	055
Profi-Tronic	126
Proline	026 049 075 127
Pulsonic	026 051 061
Pulsar	157
Pye	005 054
Quasar	155
Quelle	049 054 057 070 071 149 150 153 179 181 182 187

Radiolva	055 059 063
Radio Shack	155
Radiola	054 151
Realistic	155 157
Rex	050 060 077 154 161
RFT	052 054 055 058
Roadstar	021 042 045 053 055 059 061 067 126

Royal	055
Saba	009 050 060 077 138 139 149 150 153 154 161
Saisho	051 055 056 162
Salora	080 114 123 149 150 153 180
Samsung	210 043 067 126 157 176 194 196
Samurai	007 052 055 060
Sansui	007 050
Sanywa	056
Sanyo	039 063 099 109 122 123 149 150 153 180

Saville	045 061 126
SBR	054
Schaub Lorenz	026 049 050 060 123
Schneider	018 021 026 049 051 052 053 054 055 059 061 126 149 150 153

Scott	155
Sears	098 155
SEG	055 061 067 126
SEI-Sinudyne	054 056 188
Seleco	050 058 059 060 154 161
Sentra	052 055 058 127
Sentron	055
Shintom	055 123
Shivaki	053 059
Shorai	056
Siemens	053 057 059 070 071 123 125 179 181 187
Silva	053 059
Silver	061
Sinudyne	054 056
Solavox	052 058
Solovox	058
Sonitron	122
Sonneclair	055
Sonoko	021 061 072
Sonorol	063
Sontec	053 059

Appendix

VCR	Manufacturer Code						
Sony	003	004	013	022	027	044	066
	068	082	083	084	085	088	094
	096	097	103	113	116	117	118
	119	145	146	147	160	168	184
	185	186					
Soundwave	059						
Standard	021	061					
Starlite	059	123					
Stern	061						
Sunkai	051						
Sunstar	026	049					
Suntronic	026	049					
Sunwood	055						
Supra	059	126					
Symphonic	026	055					
Taisho	051	056					
Tandberg	061	070					
Tansai	149						
Tashiko	026	049	059	063	126		
Tatung	026	042	049	050	054	060	063
	114						
TCM	006	043	051	072			
Teac	026	060	061				
Tec	052	055	058	061			
Technics	006	069					
Teleavia	050	060					
Telefunken	007	009	050	060	077	078	081
	132	135	149	150	153	154	161
	206						
Teletex	055	061					
Tenosal	055						
Tensai	026	049	053	055	056	059	149
Tevion	006	043	051	072			
Thomson	007	009	050	060	065	077	078
	098	132	134	138	141	142	143
	144	148	152	154	156	157	161
	201	204					
Thorn	050	059	060	123	154	161	208
Two Hdd	055	088					
Tokai	053	055	059	060	123	149	
Tonsai	055						
Toshiba	012	018	035	042	043	045	048
	050	054	060	077	080	114	121
	154	162	172				
Towada	055	183					
Towika	055						
TVA	052	058					
Uher	053	059	126	154			
Ultravox	061						
Unitech	067	126					
United Quick Star	021	061					
Universum	026	049	051	053	054	057	059
	070	071	076	125	126		
Victor	007	078					
Video	006	043	051				
Wards	155	157					
Weltblick	053	059					
Yamishi	055						
Yokan	055						
Yoko	052	053	055	058	059	067	126

SAT/DVR	Manufacturer Code
Humax	005
BSkyB	035
Humax	007
TechniSat	347 011
Zehnder	034

Satellite	Manufacturer Code
AB Sat	004 056 066 103
AGS	056
Alkal	077 001 139
Alba	004 086 095 332 006 036 037
	105 106 127 141
Aldes	080 086 003 105 106 107
Allsat	068 076 077 298 003 042 108 139
Allsonic	049 080 088 002 039 106
Alltech	004 097
Alpha	077
Altai	089
Amitronica	004
Ampere	045 089 001 109
Amstrad	004 088 045 050 060 061 079 084 098 098 099 101 165 279 282 292 295 305 313 331 002 038 140
Anglo	004
Anikaro	004 049 078 080 088 286 305 313 331 002 039 106
Anitron	076 095 334 002 036 106
Aron	045 078 337 003 109 110 123
Armstrong	077 001 038
ASA	090
Asat	077 001 139

Satellite	Manufacturer Code
ASLF	004
AST	082 288 001 114
Astacom	056 161
Astra	004 053 071 085 093 288 005 038 111 112 113 133
Astro	020 022 048 049 050 053 088 095 159 004 039 040 106 107
AudioTon	095 002 042 106
Aurora	059
Austar	059 065
Avalon	089
Axiel	056
Axis	049 087 088 093 003 039 113 119
Barcom	305 313 331 001 110
Best	049 088 002 039 110
Blaupunkt	020 022 001 040
Blue Sky	004 061
Boca	004 045 094 160 177 180 192 197 204 207 208 216 223 250 260 269 002 038 133
Boston	045 056
Brain Wave	078 083 001 041
Broadcast	085 001 117
Broco	004 093
BSkyB	008 165
BT	056
BT Satellite	161 001 143
Bubu Sat	004
Bush	068 076 086 005 037 108 118 127 141
BVV	078
Cable	296
Cambridge	050 160 305 313 331
Canal Satellite	048 081 166
Canal+	048 001 142
Channel Master	086 001 105
Chaparral	305 313 322 331 001 136
CHEROKEE	056 066 285
Chess	004 047 052 001 147
CityCom	044 053 057 065 002 037 120 294
Clastronic	083 001 041
Cleamax	275
Colombia	045
Columbia	045
COLUMBUS	285 001 125
Comag	045
Commander	078
Commlink	080 001 106
Comtec	080 087
Condor	049 053 088 001 039
Connexions	049 088 089 001 116
Conrad	044 045 049 050 053 088 094 156
Conrad Electronic	004 053
Contec	087 094 002 119 120
Daewoo	002 004
Dansat	068 076 001 108
D-Box	168
DDC	086 001 105
Dew	087 001 119
Digitality	053
Digipro	062
Discover	047 052
Discovery	056
Disecq	056
Distratel	061
Distrisat	077
DNR	078
DNT	077 089 002 116 139
Drake	305 307 313 331 001 123
DStv	059
Dune	049 088
Dynasat	055
EchoStar	004 066 089 166 167 238 241 245 273 274 276 285 290 305 310 313 325 330 331 002 116 147
Einhell	004 045 050 079 080 003 036 038 106
Elap	004 056
Elsat	004 099
Elta	049 077 088 298 332 004 036 039 042 139
EmmeEsse	049 055 088 167 003 039 118 129 312
Engel	004
EURELUT	046 060 061 274
Eurocrypt	071
Europa	050 053 077 078 094
Europhon	045 053
Eurosat	298 001 038
Eurosky	044 045 049 050 053 088 002 038 039

Satellite	Manufacturer Code
Eurostar	044 053 055 057 104 001 038
Eutelsat	004
Eutra	097
Exator	095 002 036 106
Fenrer	004 047 049 052
Ferguson	068 076 158 327 328 335 336 004 037 043 108 118
Fidelity	050 079 098
Finlandia	071 001 037
Finlux	071 091 156 329 340 003 037 111 126
Flair Mate	004
Foxtel	059 064 065
Fracarro	167 305 313 331 334 001 141
Freecom	022 050 002 036 128
Freesat	060 097
FTE	088 094 160 291 308 337 002 109 130
FTEmaximal	004 049
Fuba	022 044 049 071 088 089 274 285 300 334 009 036 039 040 110 112 116 125 126 139
Fugionkyo	062
Funai	323
Galaxis	044 049 059 065 080 087 088 093 144 289 298 326 008 039 042 106 113 119 127 145 246
Galaxisat	082
Gardiner	057
Glucar Record	305 313 331
Goldbox	048 081 166
Gooding	051
Granada	071 001 111
Grandin	046 069
Grundig	008 020 022 050 051 059 061 074 084 162 164 165 236 237 240 297 305 313 331 006 037 040 106 118 140
G-Sat	076
Hanseatic	052 157 001 135
Hänsel & Gretel	045 053
Hantor	083 003 036 041 132
Hase & Igel	078
Helicomm	053 001 109
Helium	053
Hinari	076 086 001 105
Hirschmann	020 021 022 049 050 053 056 060 089 090 092 153 156 340 002 040 129
Hisawa	083 001 041
HNE	045
Houston	078
Humax	005 007 017 065 144 272 001
Huth	045 053 063 078 080 083 085 087 094 007 038 041 042 106 117 119 129
Hypson	046 274
ID Digital	065
Imex	046
Ingelen	060
International	045
Interstar	062
Intervision	053 096 001 042
ITT/Nokia	071 090 156 168
JEEMON	298 305 313 331
Johansson	083 305 313 324 331 001 041
JOK	056 100 161
JVC	051
Kamm	004
Kathrein	003 004 005 010 015 016 020 022 044 056 057 066 077 092 095 159 169 287 288 305 308 313 331 040 120 130 136 139
Kathrein Eurostar	044
Key West	045
Klap	056
Konig	053 329
Kosmos	092 308 003 128 129 130
KR	095 097 001 106
Kreiselmeier	020 022 001 040
K-SAT	004
Kyostar	045 095 001 036
L&S Electronic	045 049
Lasat	044 045 047 049 053 087 088 160 005 039 107 131 132 133
Lemon	078
Lenco	004 044 049 053 078 088 093 334 003 036 128 134
Lenson	050 001 050
Lexus	077
Lifesat	004 045 047 049 052 088 157 005 039 135 145 147 150
Lorenzen	045 053 078 101
Lupus	049 088 001 039

Satellite	Manufacturer Code
Luxor	050 071 084 156 168 288 305 306 313 331 001 111
M & B	052 157
Manata	004 045 046 056 161
Manhattan	056 161 298 004 037 042 107 118
Mascom	092 001 107
Maspro	004 020 022 051 070 078 097 162 288 305 313 331 003 037 118 136
Matsui	020 022 051 056 086 161 346 001 143
Max	053
MB	052 157 001 135
Mediabox	048 081 166
Mediasat	048 050 081 093 166 001 113
Medion	004 045 049 088 005 039 135 145 147 150
Medison	004
Mega	077 001 139
Melechronic	057
Memphis	322
Metronic	004 046 057 061 069 080 095 036 106 107 110
Metz	020 022 297 001 040
Micro	004 050 053
Micro electronic	004
Micro Technology	004 093 001 124
Micromax	049 005 039 135 145 147 150
Microtec	004
Minerva	051 297 001 040
MNet	296
Morgan's	004 045 077 094 160 003 038 133 139
Motorola	058
Multichoice	059 001 059
Multistar	308 002 130 132
Multitec	001 147
Muratto	082 002 115 128
Mysat	004
Navex	083 001 041
NEC	075 001 137
Network	076
Neuhauss	004 050 053 078 093 094 003 042 113
Neusat	004 078
NextWave	063
Nikko	004 001 038
Nokia	012 013 023 071 090 156 168 176 188 190 196 210 211 214 219 221 224 227 247 249 253 257 268 271 280 281 283 288 340 005 037 111 118 171
Nordmende	083 086 158 333 334 335 336 005 036 037 043 105 107
Nova	059
Novis	083 001 041
Octagon	078 087 095 334 003 036 106 119
Okano	308 003 038 129 130
Ondigital	032 072 073
Optex	274 298 002 042 120
Optus	048 059 063
Orbitelch	047 048 050 094 154 155 001 036
Osat	084 001 106
Pace	008 027 032 056 066 068 076 163 165 239 240 242 243 277 284 305 313 331 332 006 037 040 108 118 127 140
Packsat	056
Palcom	086 285 305 313 331 004 050 105 112 125
Palladium	050 051 001 038
Palsat	047 050 291
Panasat	054 059
Panasonic	001 008 165 003 037 118 140
Panda	022 053 068 071 002 037 108
Patriot	045 056
Philips	011 020 022 048 051 056 057 072 073 076 077 078 081 094 095 161 162 164 166 169 235 240 242 004 037 118 139 170
Phoenix	076 087 002 119 127
Phonotrend	080 144 004 037 042 106 129
Pioneer	048 166 315
Predki	083 001 041
Preisner	045 089 094 160
Premier	048
Premiere	048 065 081 166 183 210 211 217 227 271 002 042 142
Profile	056
Prosat	080 086 096 305 313 331 004 105 106 127 141
Prosonic	101

Appendix

Satellite	Manufacturer Code
Pye	051
Quadral	049 056 066 080 086 088 094 096 161 311 341 342 343 344 003 039 105 106
Quelle	044 053 079 001 040
Radlola	077 001 139
Radix	009 060 089 097 116 203 213 256 003 172 174
Rainbow	095 097 001 106
Red Star	049 088
Redpoint	093 001 113
Rex	334
RFT	077 078 080 154 002 106 139
RITAR	288
Roadstar	004
Roch	046
Rover	004 049 096
Saba	044 053 056 061 076 078 100 158 161 333 339 004 107 118 124 141
Sagem	102 001 043
Sakura	087 305 313 331 002 119 127
Salora	071 288 306 002 111 137
Samsung	006 019 275 308 314 001 036
SAT	050 082 098 003 105 114 115
Sat Cruiser	063
Sat Partner	050
Sat Team	004
Satcom	052 053 085 157 309 334 002 117 135
Satec	004 076 001 118
Satelco	049 088
Satford	085 001 117
Satlite	096
Satmaster	085 001 117
SatPartner	083 006 036 041 106 107 128 129
Satplus	047
Schacke	095
Schneider	047 056 164 004 039 145 147 150
Schwaiger	045 047 052 053 061 076 094 157 006 120 122 135 144 146 246
SCS	044
Sodea	045 062
Electronique	
Seemann	088 093 003 038 113 116
SEG	049 052 083 088 101 157 184 186 189 199 206 215 225 258 261 263 334 004 036 039 041 135
Selco	167 334 001 042
Septimo	061
Servi Sat	004 046
Siemens	020 022 160 294 297 001 040
Skantin	004
Skardin	093 001 113
Skinsat	050
SKR	004
SKY	058
Skymaster	004 014 034 047 052 080 096 104 157 182 199 202 205 212 223 229 262 267 003 106 135 147
Skymax	077 001 139
SkySat	004 047 050 052 053 335
SL	045 078
SM Electronic	004 047
Smart	004 044 045 060
Sony	048 244 001 140
SR	045 002 038 133
Starland	004 001 147
Starring	083 001 041
Strong	049 059 062 088 186 187 189 193 198 201 210 216 227 228 248 270 291 299 305 312 313 331 005 036 039 106 128 141
STV	046 274
Sunny Sound	049 088
Sunsat	004 093
Sunstar	045 049 088 002 038 133
Super Sat	055
Supermax	063
Systec	045
Tandberg	285 001 043
Techniland	085 001 117
TechniSat	347 011 047 048 050 067 077 154 155 173 175 179 181 191 194 195 220 251 259 264 301 302 345 004 116
Technology	059
Technosat	063
Technowelt	045 053 061
Telanor	285 300 001 105

Satellite	Manufacturer Code
Telesat	044 052 053 157 001 135
Tele Piu	296
Teleciel	095
Telecom	004
Teledirekt	076
Telefunken	056 161 334 338 003 036 118 143
Teleka	050 053 078 089 092 095 162 003 038 106 116
Telesat	052 053 157 001 135
Teleslar	047 048 050 001
Teletech	104
Televies	045 050 002 037 149
Tempo	063
Tensat	303
Tevlon	004 005 039 135 145 147 150
Thomson	004 024 026 028 030 031 044 048 053 056 081 158 230 231 232 233 234 242 335 037 043 143
Thorn	305 313 331 003 037 108 118
Tioko	045 001 120
Tokai	077
Tonna	004 050 085 003 037 042 117
Triad	082 003 114 115 128
Triasat	050 091 001 126
Triax	004 044 045 050 091 316 317 318 319 320 002 040
Tristar	291
Turnsat	004
Twinner	004 045 046 001 149
UEC	059 064
Uher	047
Ultravox	298
Uniden	098 278 293 305 313 331 001 138
Unisat	045 077 087 002 038 119
Universum	020 022 044 051 053 090 098 101 001 040
Variosat	020 022
Vega	049
Ventana	077 001 139
Vestel	101
Viasat	066
Visionic	062
Visiosat	004 056 100 041 042 147 148
Viva	078
Vivid	064
Vortec	032 321 334 001 036
VTech	057 001 115 082 100 114
Wela	094
Welltech	047
WeTeKom	047 050 052
Winersat	083 305 313 324 331 001 041
Wintergarten	080
WINTERNITZ	279 288
Wisi	020 022 050 053 082 089 094 100 116 178 185 190 191 197 200 209 218 219 220 222 226 252 254 255 256 265 266 318 005 037 040 114 115
World	083
Worldsat	056
Xrypton	049 088
XSAT	004 066
Zaunkonig	078
Zehnder	025 044 049 057 082 088 101 304 308 318 005 039 107 110 115 130
Zenith	058
Zinwell	065
Zodiac	095 001 106
Cabletime	305 313 331
Kenwood	305 313 331
Apollo	036
Aston	148
Brandt	143
Clemens Kamphus	129
QNT	107
Comtech	119
Cosat	042
Crown	038
Cybermaxx	150
Daeryung	116
Decca	121
Delega	105
Diamond	122
Diskopress	110
Ditristrad	042
Dong Woo	132
Elekta	107
Emanon	036
Ep Sat	037
Eurodec	043
Eurospace	124

Satellite	Manufacturer Code
Finnsat	043 119
France Satellite/TV	125
Galaxi	110
GMI	038
GoldStar	128
Goodmans	037 127
Grothusen	036 128
Hanuri	107
Hittachi	037 118
Houston	042
Imperial	127 141
Innovation	039 135 145 147 150
Intertronic	038
ITT Nokia	037 111 118
JSR	042
Leng	041
Lennox	042
LG	128
Life	145
Lifetec	039 135 145 147 150
Lion	124
Lorraine	128
Lyonnaise	043
Macab	043
Marantz	139
Mediamarkt	038
Microstar	039 135 145 147 150
Mitsubishi	037 040 143
Mitsumi	133
Morgan Sydney	149
Next Wave	146
Nomex	151
Oceanic	122 124
Orbit	114
Origo	124
Otto Versand	040
Pacific	122
Paltec	112
Polsat	043
Polytron	120
Priesner	038
Profi	134
Promax	037
Protek	122
Provision	107
Quiero	043
Redifusion	137
Redstar	039
Ruefach	134
Sabre	037
Silva	128
Sky Digital	140
Skyvision	042
Start Trak	036
Sumida	038
Tandy	106
Tantec	037 050 118 125
Tatung	121
TCM	039 135 145 147 150
Teco	038 133
Telemaster	107
Telemax	131
Telewire	042
Thorens	122
TPS	102
Unitor	041 110
Variostat	040
Vector	124
Via Digital	024
Vivanco	152
Wevasat	037
Wewa	037
Woorisat	107

Satellite Receiver	Manufacturer Code
Hauppauge	018 029





Satellite Receiver/Recorder	Manufacturer Code
Humax	005
Kathrein	033

Cable Box	Manufacturer Code
ABC	375
Alcatel	373 374
Amstrad	378 380
Arcon	380
Axis	380
Cabletime	348 349 350 366 368 370
Clyde Cablevision	351
Comcrypt	376
Cryptovision	352
Fidelity	380

Cable Box	Manufacturer Code
Filminet	376
Filminet Cablecrypt	353 369
Filminet Comcrypt	353
Finlux	355
Foxtel	378
France Telecom	371 372 377
Freebox	379
GEC	351
General	367 375
Instrument	
Gooding	354
Grundig	380 354
Hirschmann	355
ITT Nokia	355
Jerrold	356 362 364 367 375
JVC	354
Macab	372 377
Maspro	354
Matsui	354
Minerva	354
Mnet	369 376
Movie Time	361
Mr Zapp	377
Multichoice	376
Nokia	355
Noos	377
Palladium	354
Philips	354 363 371 372 377
Pioneer	380 357 358
PVP Stereo Visual	364
Matrix	
Sagem	372 377
SAT	380
Scientific Atlanta	359 360
Starcom	375
Tele+1	353 369 376
Telepiu	369 376
Torx	375
United Cable	364
Universum	354 355
Videoway	365
Visiopass	355 371 372 377
Wittenberg	380

SAT/DVD	Manufacturer Code
Humax	005 (SAT)/048 (DVD)

Troubleshooting

Problem	Possible Solution
<ul style="list-style-type: none"> No power. 	<ul style="list-style-type: none"> Make sure the Display and AVC System are connected correctly (Page 9). Check if you pressed TV  on the remote control unit. If the indicator on the Display lights up red, press TV . Is the AC cord disconnected? Check if you pressed  on the Display.
<ul style="list-style-type: none"> The TV cannot be operated. 	<ul style="list-style-type: none"> External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the TV after first turning off the power of the Display and AVC System, or unplugging the AC cord and re-plugging it in after one or two minutes.
<ul style="list-style-type: none"> Remote control unit does not operate. 	<ul style="list-style-type: none"> Are batteries inserted with polarity (+, -) aligned? Are batteries worn out? (Replace with new batteries.) Are you using it under strong or fluorescent lighting? Is a fluorescent light illuminating to the remote control sensor?
<ul style="list-style-type: none"> Picture is cut off. 	<ul style="list-style-type: none"> Is the image position correct? Are screen mode adjustments (WIDE MODE) such as picture size made correctly? (Pages 38 and 46)
<ul style="list-style-type: none"> Strange colour, light colour, or dark colour, or colour misalignment. 	<ul style="list-style-type: none"> Adjust the picture tone. Is the room too bright? The picture may look dark in a room that is too bright. Check the "Colour System" setting (Pages 36 and 41).
<ul style="list-style-type: none"> Power is suddenly turned off. 	<ul style="list-style-type: none"> The TV's internal temperature has increased. Remove any objects blocking the vent or clean. Is the "Sleep Timer" set? Select "Off" from the "Sleep Timer" menu (Page 33). Is "No Signal Off" or "No Operation Off" activated?
<ul style="list-style-type: none"> No picture. 	<ul style="list-style-type: none"> Are connections to external equipment correct? (Pages 22–24) Is the input signal type selected correctly after connection? (Page 41) Is the correct input source selected? (Page 17) Is a non-compatible signal being input? (Page 49) Is the picture adjustment correct? (Pages 31–32) Is the antenna connected properly? (Page 9) Is "On" selected in "Audio Only"? (Page 39)
<ul style="list-style-type: none"> The message "LOSS OF SYNC" is displayed. 	<ul style="list-style-type: none"> Is the HDMI cable between the Display and AVC System properly connected? (Pages 8 and 9)
<ul style="list-style-type: none"> No sound. 	<ul style="list-style-type: none"> Is the volume too low? Make sure that headphones are not connected. Check if you pressed  on the remote control unit.
<ul style="list-style-type: none"> The TV sometimes makes a cracking sound. 	<ul style="list-style-type: none"> This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV's performance.

Cautions regarding use in high and low temperature environments

- When the TV is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the TV will recover when the temperature returns to normal.
- Do not leave the TV in a hot or cold location. Also, do not leave the TV in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
Storage temperature: +5 °C to +35 °C.

Information on the software license for this product

Software composition

The software included in this product is comprised of various software components whose individual copyrights are held by SHARP or by third parties.

Software developed by SHARP and open source software

The copyrights for the software components and various relevant documents included with this product that were developed or written by SHARP are owned by SHARP and are protected by the Copyright Act, international treaties, and other relevant laws. This product also makes use of freely distributed software and software components whose copyrights are held by third parties. These include software components covered by a GNU General Public License (hereafter GPL), a GNU Lesser General Public License (hereafter LGPL) or other license agreement.

Obtaining source code

Some of the open source software licensors require the distributor to provide the source code with the executable software components. GPL and LGPL include similar requirements. For information on obtaining the source code for the open source software and for obtaining the GPL, LGPL, and other license agreement information, visit the following website:
<http://www.sharp-eu.com/gpl/>

We are unable to answer any questions about the source code for the open source software. The source code for the software components whose copyrights are held by SHARP is not distributed.

Acknowledgements

The following open source software components are included in this product:

- linux kernel • busy box • uClibc • zlib • libpng • libjpeg

Updating your TV via DVB-T

Ensure that your TV software version is always up to date. From time to time SHARP will make updated TV base software and DVB software available.



Digital Setup

Download Setup

Searching for updates*

* All countries except UK and Sweden are set to “No” for this function.

The TV automatically determines whether a new software version is available when the TV is in standby mode.

Item

Yes: Automatically searches for new software updates available when the TV is in standby mode.

No: Does not search for update information.

Now: Checks if there is new software immediately.

Downloading the software

You can select the method of update.

- 1 If the software is updated, the confirmation message “New download information has been detected.” appears.
 - If the TV receives the update service while in standby mode, a confirmation message displays after turning on the power.
- 2 Follow the screen prompts.

Item

Yes: Starts downloading immediately. It takes approximately one hour to update. You cannot carry out other operations while downloading.

- Cancels the download by pressing **OK** on the remote control unit when “Discontinue” is displayed on the screen during the update.

No: Starts downloading automatically several minutes after entering standby mode.

NOTE

- The TV must remain in standby mode for download. Do not turn off the main power using on the Display.
- Updating the software may take some time.



Information

Message List

When new software is detected, you can confirm the update information and download the software from “Message List”.

NOTE

- When the TV succeeds at downloading new software, the message is updated in the “Message List” of the “Information” menu.
- The software update will not be carried out if there is no new software available at the specified download time.



Information

Receiver Report

Display reports regarding failures and changes for timer settings.

Reset

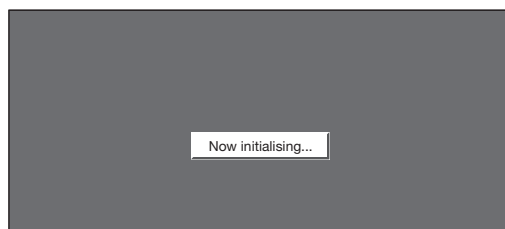
If complex adjustments are made so that the settings cannot be restored to normal, you can reset the settings to the factory preset values.



Setup

Reset

- 1 Go to “MENU” > “Setup” > “Reset”.
- 2 Press to select “Yes”, and then press **OK**.
 - “Now, TV will restart automatically. OK?” displays on the screen.
- 3 Press to select “Yes”, and then press **OK**.
 - “Now initialising...” displays on the screen and blinks.
 - After the reset has completed, the main power shuts off and then comes back on. The screen will have returned to its original settings.



Identification



Setup

Identification

You can check the TV ID on the screen for reporting to customer service.

Picture maintenance

When you use your TV for a long period of time, colour shading on the screen may appear due to degradation of the LED backlight. You can control the colour shading after performing “Picture maintenance” in “Identification”, following the guide display on the screen.

NOTE

- This function allows you to control the colour shading. Therefore, the brightness of the screen may reduced.

Updating your TV via USB



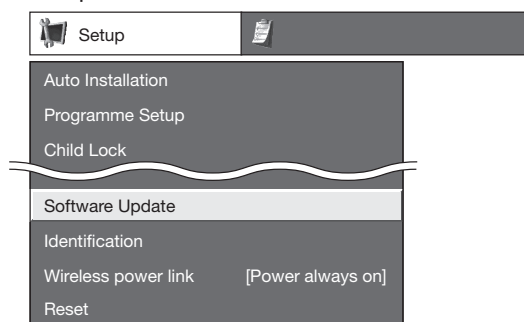
Setup

Software Update

This function allows you to update to the latest software using a USB device.

You must update the software individually for both the Display and AVC System through the USB terminal located on each.

- 1 Press **MENU** and the "MENU" screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "Software Update", and then press **OK**.



- 4 Press **◀/▶** to select the device you want to update, and then press **OK**.

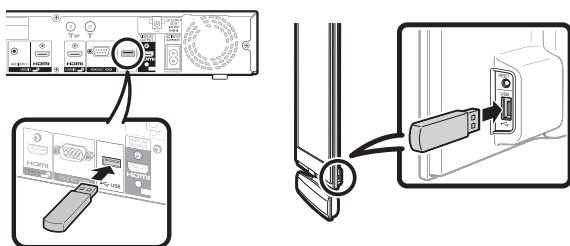


Item

AVC system: Select "AVC system" when you want to update the system for the AVC system.

Monitor: Select "Monitor" when you want to update the system for the Display.

- 5 Press **OK** and then insert the USB device containing the software update file.



CAUTION

- Be sure to insert the USB device correctly into the terminal of device you select in step 4.

- 6 The TV displays a confirmation screen while checking the data in the inserted USB device.



CAUTION

- If the data is not compatible with the system, an error message appears on the screen. Repeat steps 5 and 6 after pressing **OK**.
- When an error message displays, check to see if:
 - The USB device is inserted firmly.
 - The USB device is inserted in the USB terminal of the device you selected in step 4.
 - The USB memory has two or more software update files.
 - No data for updating the system exists in the USB memory.
 - The software update file is broken.
 - The software update file is not compatible with your TV's software.
 - The current system is same as the system update data.

- 7 The TV displays the software version information after checking the data.

- 8 Press **◀/▶** to select "Yes" to update the system, and then press **OK**.



- 9 Press **OK** to automatically reset and start the update operation.

NOTE

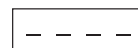
- This operation may take a while.

The TV starts updating the system

A confirmation message appears on the screen after completing the update and then automatically restarts the TV. Press **OK** to complete the operation.

CLEARING THE PIN

- 1 Go to "MENU" > "Setup".
- 2 Press **▲/▼** to select "Auto Installation", "Programme Setup", "Child Lock" or "Reset", and then press **OK**. The PIN input window will display.



- 3 Press and hold both **P▲** and **▶+** on the Display simultaneously until the message appears on the screen.

Specifications

Item			52" LCD COLOUR TV, Model: LC-52XS1E (Display), TU-X1E (AVC System)	65" LCD COLOUR TV, Model: LC-65XS1E (Display), TU-X1E (AVC System)		
LCD panel			52" Advanced Super View & BLACK TFT LCD	65" Advanced Super View & BLACK TFT LCD		
Resolution			2,073,600 pixels (1,920 × 1,080)			
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60			
TV Function	TV-Standard	Analogue	CCIR (B/G, I, D/K, L/L')			
		Digital	DVB-T (2K/8K OFDM), DVB-C, S/S2			
	Receiving Channel	VHF/UHF	E2–E69 ch, F2–F10 ch, I21–I69 ch, IR A–IR J ch (Digital: IR A ch–E69 ch)			
		CATV	Hyper-band, S1–S41 ch			
	TV-Tuning System		Auto Preset 999 ch: non-Nordic / 9999 ch: Nordic (ATV: 99 ch), Auto Label, Auto Sort			
	STEREO/BILINGUAL		NICAM/A2			
Brightness			450 cd/m²			
Backlight life			60,000 hours (when "Backlight" is set to the default position)			
Viewing angles			H: 176°, V: 176°			
Audio amplifier			7.5 W × 2, 15 W (subwoofer)			
Speaker			50 mm × 120 mm × 2, Ø 26 mm × 2, Ø 77 mm × 1			
Terminals (AVC System)	Front	EXT4	15 pin mini D-sub, Ø 3.5 mm jack			
		HDMI3 (EXT7)	HDMI			
		EXT8	S-VIDEO (Y/C input), RCA pin (AV input)			
		C.I. (Common Interface)	EN50221, R206001			
		Headphones	Ø 3.5 mm jack (Audio output)			
	Rear	Antenna input	UHF/VHF 75 Ω Din type (Analogue & Digital)			
			Satellite 75 Ω F type (DVB-S1/S2)			
		RS-232C	D-Sub 9 pin male connector			
		EXT1	SCART (AV input, Y/C input, RGB input, TV output)			
		EXT2	SCART (AV input/monitor output, Y/C input, AV Link, RGB input)			
		EXT3	COMPONENT IN: Y/P _B (C _B)/P _R (C _R), RCA pin (AUDIO R/L)			
		HDMI1 (EXT5)	HDMI, Ø 3.5 mm jack			
		HDMI2 (EXT6)	HDMI			
		USB	USB			
		DIGITAL AUDIO OUTPUT	Optical S/PDIF Digital audio output			
		OUTPUT	RCA pin (AUDIO R/L)			
		DISPLAY OUTPUT	HDMI			
		DC OUTPUT	DC 5V 1.8A MAX			
		Terminal (Display)		USB	USB	
DISPLAY INPUT	HDMI					
DC OUTPUT	DC 5V, 1.8A MAX					
SPEAKER OUTPUT	L/R, WOOFER					
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian			
Power Requirement			AC 220–240 V, 50 Hz			
Power Consumption (Method IEC62087)			LC-52XS1E	294 W (1.0 W Standby)	LC-65XS1E	512 W (1.0 W Standby)
			TU-X1E	49 W (0.5 W Standby)	TU-X1E	49 W (0.5 W Standby)
Weight			45.0 kg (Display), 3.8 kg (AVC System)		62.5 kg (Display), 3.8 kg (AVC System)	
Operating temperature			0 °C to +40 °C			

- As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

NOTE

- Refer to the inside back cover for dimensional drawings.

End of life disposal



Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.

Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.

*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.



Information on Battery Disposal

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation. Please contact your local authority for details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery.

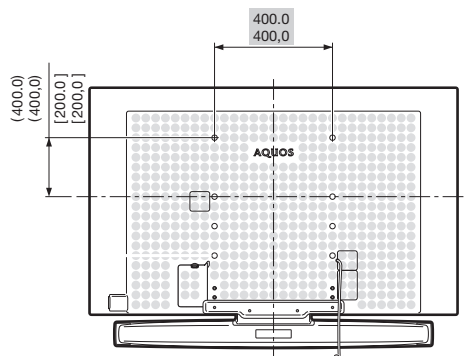
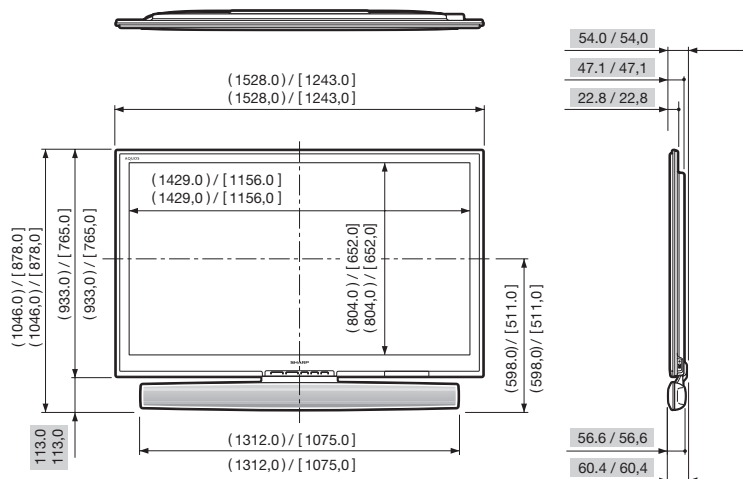
Rating table for Child Lock

<div><div>Broadcasted rating</div><div>User-adjusted rating</div></div>	AGE															
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Universal viewing	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Parental approval pref.	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—	—	
X-rated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

User-adjusted rating \ Broadcasted rating	Universal viewing	Parental approval pref.	X-rated
	—	—	—
Universal viewing	—	—	—
Parental approval pref.	✓	—	—
X-rated	✓	✓	—

Abbreviation list

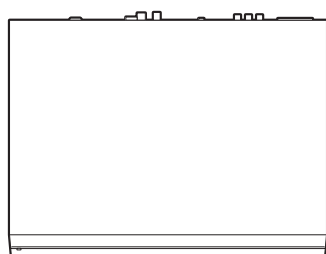
Abbreviated term	Stands for
ATV	Analogue TV
CEC	Consumer Electronics Control
DNR	Digital Noise Reduction
DTV	Digital TV
DVB-C	Digital Video Broadcasting-Cable
DVB-S	Digital Video Broadcasting-Satellite
DVB-T	Digital Video Broadcasting-Terrestrial
DVI	Digital Visual Interface
EPG	Electronic Programme Guide
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
MHEG	Multimedia and Hypermedia Expert Group
MPEG	Moving Picture Experts Group
OSD	On Screen Display
PCM	Pulse Code Modulation
SAT	Satellite
USB	Universal Serial Bus
WSS	Wide Screen Signalling
WYSIWYR	What You See Is What You Record



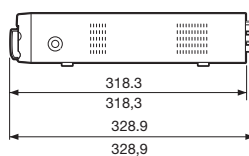
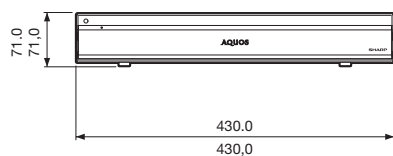
() : LC-65XS1E

[] : LC-52XS1E

■ : LC-52XS1E/65XS1E



: TU-X1E



SHARP®

SHARP ELECTRONICS (Europe) GmbH

SonninstraÙe 3, D-20097 Hamburg

SHARP CORPORATION

Printed in Japan
Gedruckt in Japan
Imprimé au Japon
Stampato in Giappone
Gedruckt in Japan
Impreso en Japón
Impresso no Japão

PIN

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TINS-D825WJN1
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